SERVICE

Pressure-Temperature Relationship Easily Obtained with this Chart

DAYTON—The refrigerant chart devised by A. A. McCormack here to help service men in their work with refrigerants is a 4¼-in. round chart with circular discs on each side which may be turned to determine the operating pressures corresponding to various temperatures of six common refrigerants — ammonia, Freon, methyl chloride, sulphur dioxide, isobutane, and ethyl chloride.

One side of the chart gives pressure-temperature relationships from —14° to 40° F. (temperatures normally found in the low side), while the other side covers temperatures from 45° to 130° F. (which includes the range of condenser temperatures).

In using the chart, the disc is turned until the arrow at the top of the window points to the working temperature. Then the figures showing through the window give the gage pressure readings for the various refrigerants at that temperature. All readings are in pounds gage, except those below the zero gage reading which are given in inches of vacuum.

Supposing one wants to know what pressure sulphur dioxide will have in a 100° room. By turning the arrow to 100° and looking opposite sulphur dioxide, one reads 69.8 lbs. Or, if a drum of refrigerant shows an 81-lb. gage reading and the room temperature is 78° F., one could turn the arrow of the chart to 78° and read through the windows to see that Freon is the refrigerant that would have the 71-lb. pressure at that temperature.

The chart should be useful to servicemen, Mr. McCormack believes, and gives the following examples:

Converting from One Refrigerant to Another

"Let us suppose the serviceman knows the proper operating pressures for sulphur dioxide and he is called on to service a methyl chloride installation. Let us further assume that the serviceman knows that the unit in question for sulphur dioxide should be set at, say, 9 in. of vacuum.

"Setting the dial until the reading opposite sulphur dioxide is 9 in. (or as nearly this as can be read), and then looking opposite methyl chloride, the reading of 4 lbs. is found. This is the corresponding setting for methyl chloride equivalent to the 9-in. setting of sulphur dioxide.

"Determination of air in the system is best made with the unit shut down and the condenser at room temperature. The serviceman reads the room temperature and from the chart determines what the pressure should be for the refrigerant used in the system. Then, if his pressure gage reading on the high side is greater than this, it is due to air in the system and the unit should be purged until the gage comes down to substantially the reading of the chart.

Lack of Refrigerant

"If, when following the above procedure, a serviceman finds the pressure on the gage lower than the chart reading, he is short of refrigerant—in fact is nearly empty of refrigerant.

"Proper low side or suction pressures are very important information for the serviceman. At the bottom of the chart is the approximate temperature settings for different applications and the instructions issued with each chart give further information as to proper operating temperatures. Then, by setting the arrow on the chart to the temperature desired, it is easy to find the correct setting for the suction pressure. This is particularly desirable when one wishes to operate on a cycle that just defrosts each time the unit is on the off cycle.

"Air-cooled units will operate at pressures above that corresponding to room temperature, ordinarily about 20° above the room temperature. Some air-cooled jobs, particularly commercial, will operate at pressures considerably in excess of this figure. Restricted air flow or water flow will increase head pressure. Higher suction pressures will make higher condensing pressures on air-cooled installations. Too much refrigerant will rapidly increase the head pressure. Household units using the flooded system or the restrictor will have higher head pressures during ice freezing.

"By the chart, find the pressure corresponding to the desired refrigerant temperature for the evaporator. The bottom of the chart shows the approximate temperatures for different applications. An expansion valve system should be set to run at this value. A flooded system should be set to cut out at about three degrees lower than this value, except sulphur dioxide low side float jobs which generally should be set to cut out at about five degrees below this value. If a defrosting coil is wanted, the cut-in of the switch should take place at a temperature just above 32°. This can be found on the chart."

As well as the temperature-pressure relationships, the method of testing for leaks is given for each different refrigerant. For those who figure compressor efficiencies and capacities there are the relationships between units of horsepower, B.t.u.'s, tons of refrigeration and watts of electrical energy. This covers most of the conversion factors normally needed in figuring capacities and efficiencies.

Handy Chart for Service Men

REFRIGERANT-CHART
PRICE 50 CENTS
LEAK TEST LITMUS PAPER
LEAK-TEST-ALCHOHOL TORCH
LEAK-TEST-ALCHOHOL TORCH
LEAK-TEST-AMMONIA BRUSH
LEAK-TEST-SOAP BUBBLE
LEAK-TEST-SOAP BUBBLE
AMMONIA (NH3)
FREON OR F-12 (C Cl2 F2)
METHYL CLORIDE (CH3Cl)
SULPHER DIOXIDE (SO2)
ISO-BUTANE OR FREEZOL (C4H10)
ETHYL CLORIDE (C2H5Cl)
ONE TON REFRIGERATION = 200 BTU PER MINUTE
ONE POUND OF ICE MELTING = 144 BTU.
ONE HORSE-POWER HOUR = 2545 BTU.
ONE WATT-HOUR=3.41 BTU
746 WATTS = 1 HORSE-POWER
APPROXIMATE REFRIGERANT TEMPERATURE FOR VARIOUS APPLICATIONS
HOUSE-HOLD REFRIGERATOR 7°. AIR CONDITIONING & WATER COOLING 35°. ICE CREAM -10°

This disc makes possible determinations of refrigerant requirements.

CORLISS APPOINTED BY LEWIS-SHEPARD CO.

BOSTON — George H. Corliss has just been appointed sales promotion and advertising manager for Lewis-Shepard Co., manufacturer of trucks and tiering machines for handling electric refrigerators.

AIR-COOLING MARKET HAS LARGE SPREAD

DETROIT—Remarkable to R. F. Callaway, branch manager, and E. E. McEwan, in charge of air-conditioning sales for the Detroit branch of Frigidaire Corp. is the variety of establishments which purchased air-conditioning equipment this summer.

Frigidaire air conditioners were sold to homes, drug stores, jewelry stores, clothiers, undertakers, and a radio station as well as to several offices and restaurants, they report.

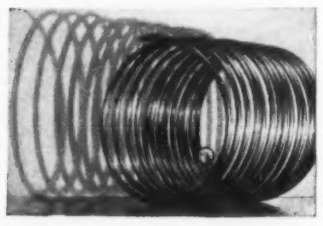
Most of these purchasers bought the equipment mainly because of the business-building effects of air conditioning in increasing their retail trade.

The Frigidaire branch installed a total of 134½ tons of air conditioning in Detroit this year through last week, in 22 separate establishments. At the present time Mr. McEwan is concentrating on prospects who would be relieved from hay fever by air conditioning, and expects to have more sales from this market before the year is over.

G-E Transfers Kimball To Engineering Staff

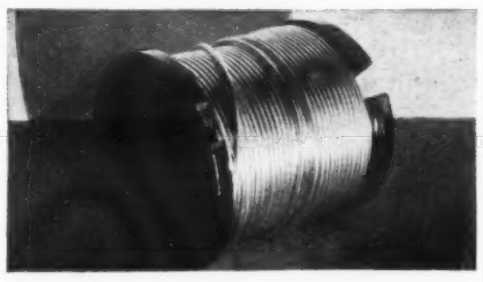
SCHENECTADY, N. Y.—Transfer of A. L. Kimball from the staff of the General Electric research laboratory to the engineering general department has just been announced.

In his new position Mr. Kimball will be associated with A. R. Stevenson, Jr., and will assist all design engineering departments of the company on problems involving ventilation, vibration and noise, cooperating closely with the laboratories. Succeeding Mr. Kimball, E. L. Thearle will direct the activities of the mechanical research section of the research laboratory.



Coil of 60 ft.

Reel of 425 ft.



FRENCH TUBES

are available in

LONG LENGTHS

A NEWLY developed process makes possible the production of French Seamless Copper Refrigeration Tubes as large as one-half inch in diameter, in lengths up to 200 feet. Smaller tubes are available in even *longer* lengths. For instance, the one-quarter inch tube illustrated is 425 feet long.

These new *long* lengths materially reduce the risk of failure by minimizing splices. Also the longer lengths reduce scrap losses, as the exact amount required can be cut without waste at the ends.

French De Luxe Copper Refrigeration Tubes are free from oxide and foreign matter. Each coil is *completely* dehydrated, sealed, rigidly tested and reaches you ready for use. For manufacturers who prefer to do their own dehydrating, the French Manufacturing Company produces copper tubes dried (*commercially* dehydrated) with either open or closed ends.

All French Copper Refrigeration Tubes possess the requisite properties for lasting, dependable service. Their grain structure is uniform. These important qualities are in every coil because metallurgical skill, long manufacturing experience and only the best of raw material go into their production. Additional information will be furnished upon request.

THE FRENCH MANUFACTURING CO.
General Offices: Waterbury, Connecticut

FRENCH REFRIGERATION TUBES

NEW PLANT CAN RE-BUILD 500 OLD MOTORS DAILY

LONG ISLAND CITY, N. Y.—Specializing in the re-manufacture of refrigeration motors up to 1½ hp., Chas. L. Chittenden organized the Refrigeration Motor Service here a year and a half ago, and has just extended plant facilities so that 500 motors can be re-built daily. The new plant is on 33rd St. here, and has 10,000 sq. ft. of floor space.

The company re-manufactures motors for sale on a wholesale basis only; that is, re-built motors are sold to service companies, dealers, and distributors, but not to consumers.

Used motors are taken in on the purchase of new as well as re-manufactured motors, Mr. Chittenden declares, and are re-manufactured and placed in stock for future purchasers.

Mr. Chittenden was previously connected with United Motors Service in New York City.

Steiner Heads Mills Freezer Sales

CHICAGO—Mills Novelty Co. here has appointed Harry E. Steiner general sales manager in charge of refrigeration products. Steiner formerly was vice president and general sales manager of the Holcomb & Hoke Mfg. Co., Indianapolis.

Add this organization to your own

Above—Location of Wagner's 16 branch offices.

At Left—The Wagner plant at St. Louis.

by applying

WAGNER MOTORS

to your refrigerators

When you design an electric refrigerator and program the expenditure of time, effort and money to develop sales for that product, you naturally give consideration to the staying qualities of that manufacturer. Perhaps you investigate the manufacturer's financial condition. All of this is good business.

Past performance is about the only yard stick by which you can measure the staying qualities of any manufacturer.

Wagner offers its record of forty years' service to the electrical industry as evidence of its staying qualities. In those forty years Wagner has built a national reputation and acceptance of its products. Wagner offers to refrigerator manufacturers and dealers the cooperation of a nationwide organization, 26 branch offices, service stations and motor warehouses.

Wagner Electric Corporation
6400 Plymouth Avenue, Saint Louis, U.S.A.
MOTORS TRANSFORMERS FANS BRAKES
M233-1G

THE NEWSPAPER OF THE INDUSTRY

ELECTRIC REFRIGERATION NEWS

WRITTEN TO BE READ ON ARRIVAL

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TEN CENTS PER COPY

150 GIBSON MEN ENJOY HOLIDAY AT 3-DAY CAMP

Duck Lake Is Scene Of Informal Retreat

By Elston D. Herron

CAMP SHIWANDOSSEE, MICHILLINDA, Mich.—While wives, work, and worry stayed at home, Gibson refrigerator distributors, quota-smashing dealers, and factory officials—150 in all—congregated for three days last week at this wooded camp on Duck Lake to play, loaf, and make a game attempt at living the Simple Life for a while.

Theme of the three-day encampment (Monday through Wednesday) was "Do as you darn please." At the start, President C. J. Gibson promised in his one-minute address of welcome that there would be "no speeches, and no business discussions." That promise was kept.

Within an hour, the campers were so thoroughly imbued with the spirit of the no-business policy that the half-dozen newspapermen present gave up interviewing as a bad job and joined the Gibsonians as co-playboys.

Nothing about the camp had the slightest aspect of formality. Real camp food was served camp fashion in the rough-raftered mess hall. Shaving was taboo. Costumes varied from once-white flannels to Scotch kilts and no-piece bathing suits.

The men wore vari-colored jockey caps and acted as free as the autumn Michigan air—temperature of which presented the greatest of the camp's problems, and caused numerous bed-time difficulties.

Majority of the camp delegates arrived in Greenville, home of the Gibson plant, at 8:15 a. m. Monday on the Gibson Special from Chicago. They were met by a group of factory officials, loaded into cars, and driven through a chilly drizzle of rain to the Greenville Country Club for breakfast.

Shortly after the morning meal, a number of the men drove to Greenville's downtown district, invaded clothing stores, bought caps, raincoats, and rubbers. Whereupon the rain ceased and the sun began to shine brightly. No more rain fell during the entire encampment.

Back at the factory, the visiting distributors and dealers were escorted through the plant to see how Gibson refrigerators are made. At 11:30, the party returned to the country club for one last meal before leaving for Duck Lake 70 miles away.

A caravan of 50 cars, headed by Vice President Frank Gibson's Lincoln and convoyed by Michigan State policemen, took the men on their trip back to nature, drove them through Muskegon's business district for one last look at civilization, then continued

(*Concluded on Page 6, Column 1*)

ELECTRICAL SHOW OPENS TODAY IN NEW YORK CITY

NEW YORK CITY, Sept. 20.—Combined efforts of the army, navy, police force, radio manufacturers, and electrical industry presented an imposing array of exhibits to first-nighters at the opening today of the 1933 National Electrical and Radio Exposition in Madison Square Garden here.

The show marks the first time in the city of New York that leading broadcasting companies and electrical manufacturers have joined forces in an exposition, according to Clarence E. Law, president of the Electrical Association of New York which is sponsoring the exhibit.

Among the electrical manufacturers exhibiting are 12 refrigeration organizations, including Apex, Crosley, Frigidaire, General Electric, Gibson, Grigsby-Grunow, General Household Utilities, Kelvinator, Norge, Sparks-Withington, Stewart-Warner, and Westinghouse.

Under the direction of Brig. Gen. Dennis E. Nolan of the Second Army Corps, exhibits have been arranged demonstrating the use by the army and navy radio and electrical devices in signalling, and sound and sight detection on land and sea. Tactics of modern warfare, including com-

(*Concluded on Page 4, Column 4*)

Gas Association Men to Convene In Chicago

CHICAGO—For a convention which is to be international in scope, executives of gas companies and associations in this and foreign countries will meet at the Stevens hotel here Sept. 25 to 29 to attend the International Gas Conference and the fifteenth annual conclave of the American Gas Association.

First of the five days will be given over to sectional meetings of these divisions: main technical and research committee of the A.G.A. natural gas department, manufacturers' section, natural gas department.

On Sept. 26, the first general session will be held, starting at 10 a. m., to study the industry's international aspects. Speakers at this session will be leading foreign delegates at the convention.

Second general session is scheduled for 10 a. m., Sept. 27, with the following men as speakers: Alexander Forward, managing director of the A.G.A.; Vice President E. M. Tharp, Ohio Fuel Gas Co.; Conrad N. Lauer, chairman of the National Directing Committee of Executives.

Third and last general session is set for 10 a. m., Sept. 28. Addresses will be given by H. D. Hancock, chairman of H. L. Doherty & Co.; F. C. Wever, vice president of the Brooklyn Union Gas Co.; Lester Hooker, president of National Association of Railroad and Utilities Commissioners; and Dr. Harvey N. David, president of the Stevens Institute of Technology.

Other divisional meetings of the gas association are to be held in the afternoons of Sept. 26, 27, and 28.

746 PERSONS ADDED TO CROSLEY PAYROLL

CINCINNATI — Employment increase during August of more than 43 per cent at the Crosley Radio Corp. was reported last week by Powel Crosley, Jr., president, after a check on his company's employment figures for its first month under the NRA banner.

These records show a total of 2,456 men and women on the Crosley payrolls as of Sept. 1, 746 having been added during the preceding 31-day period.

Approximately 2,500 radios are being manufactured daily at the Crosley factory, according to Mr. Crosley, and present plans call for daily manufacture of 3,000 to 3,500 sets within the next two weeks.

"We have a backlog of unfilled radio orders totalling approximately 30,000 sets," Mr. Crosley stated.

REFRIGERATION EXECUTIVES TO ADDRESS D.M.A.A.

Leavenworth, Pierce, Cosgrove Are Speakers

CHICAGO—Ralph W. Leavenworth, general advertising manager of Westinghouse Electric & Mfg. Co., R. C. Cosgrove, manager of the Westinghouse refrigeration division, and F. R. Pierce, sales manager of Frigidaire Corp., will be speakers at the annual conference of the Direct Mail Advertising Association to be held at Hotel Sherman here Sept. 26 to 29.

Other speakers at the meeting will include Forrest U. Webster, advertising manager of Cutler-Hammer, Inc., and A. E. Schwarz, sales manager of the Minnesota Northern Power Co., Minneapolis.

Mr. Leavenworth will speak at the association's industrial advertising conference to be held the afternoon of Sept. 28. His subject will be, "How Direct Mail Can Be Used Effectively with Publication Advertising." Mr. Webster will address the same meeting on "How Industrial Advertising Executives Are Meeting Today's Marketing Challenge."

At the marketing conference, scheduled for 9:30 a. m., Sept. 28, Messrs. Cosgrove and Schwarz will direct round-table discussions relative to sales and advertising problems arising out of the national recovery movement.

Mr. Pierce of Frigidaire will speak at the association's general session, which opens at 9:45 a. m., Sept. 29, on the subject, "How Frigidaire Uses the Mails to Build Business."

Pictures

Electrolux and Servel refrigeration exhibits and installations at the 1933 Chicago World's Fair are pictorialized in the current rotogravure supplement to Electric Refrigeration News.

Scenes from A Century of Progress exposition—some of them extraordinary in photographic merit—comprise the bulk of this special section.

Two thousand copies of this issue of Electric Refrigeration News will be distributed at the American Gas Association convention.

Beer Cooling Book Is Ready for Distribution

Containing a wealth of information for those interested in the manufacture and sale of beer and beer-cooling equipment, the new 112-page Beer Cooling Equipment Directory and Handbook has just been issued by the Business News Publishing Co. Price of the directory is 35 cents per copy.

Three types of material comprise most of the handbook. First is a series of articles describing types of automatically refrigerated beer dispensers now available, proper application of electric refrigeration to beer cooling, care of equipment, pressure control, state beer laws, etc.

Second is a directory of manufacturers of draft and bottle beer coolers and beer-cooling units, another of manufacturers of pumps, refrigerating machines, and parts for beer-cooling systems.

Third is a listing of specifications of 52 makes of draft beer dispensing equipment, followed by another collection of specifications on 18 makes of bottle beer dispensers.

Importance of electric refrigeration to today's beer business is outlined in the handbook's first article, which goes on to describe various types of beer-cooling equipment now being manufactured. These include draft coolers, bottle coolers, portable bars, and pre-coolers.

Prepared by engineers of Frigidaire Corp., the book's second article gives detailed instructions on the estimating and application of electric refrigeration equipment to beer serving and storage. This 11-page exposition con-

(*Concluded on Page 4, Column 5*)

ELECTROLUX SECURES 500 NEW OUTLETS

EVANSVILLE, Ind.—Since January of this year, more than 500 new Electrolux outlets have been franchised, a number of them being department stores and retailers already handling electric refrigerators, according to F. E. Sellman, vice president in charge of sales of Servel, Inc.

August Electrolux shipments were more than 100 per cent greater than those of the same month last year, bringing the year's total to date ahead of similar periods in both 1931 and 1932, he states.

Five distributors of bottled gas—Pyrofax, Philgas, Shellane, Skelgas, and Standard Flamo—are now merchandising Electrolux refrigerators through special departments organized for this purpose.

SAYRE RESIGNS AS KELVINATOR SALES MANAGER

Given Cadillac V-12; Joins Montgomery Ward & Co.

DETROIT, Sept. 20.—Jud Sayre, who has been sales manager of Kelvinator Corp. for six years, and who has been with that concern since July 1, 1925, has resigned to join Montgomery Ward & Co. in Chicago.

This afternoon on the lawn fronting the Kelvinator plant in Detroit, Mr. Sayre was presented with a Cadillac V-12 automobile by the Kelvinator distributing organization as an expression of good will for his past efforts in working with Kelvinator distributors and dealers.

Following the presentation of the car, Mr. Sayre was feted at a banquet in the Book-Cadillac hotel. In addition to factory and office personnel, a number of Kelvinator distributors and field representatives were present at this farewell party.

Mr. Sayre has cleared off his desk at Kelvinator, and will assume his new responsibilities in the immediate future.

BREWING & COOLING OF BEER DISCUSSED

DETROIT—Between 60 and 70 Detroit engineers congregated for the first fall meeting of the local A.S.R.E. here Monday night to hear Herman Rosenbusch, chief engineer of Stroh Products Co., Detroit, and D. C. Seitz, chief engineer of the Russ Mfg. Co., Cleveland.

Mr. Rosenbusch described methods of making and handling beer as practiced by the Detroit brewery, while Mr. Seitz told about the new developments in the control of pressures and temperatures in electrically refrigerated beer dispensers.

"You might be surprised to know," Mr. Rosenbusch told the Detroit A.S.R.E., "that today's 3.2 beer has about as much wallop as pre-prohibition beer. Draft beer in those days was about 3 per cent alcohol.

"Bottled beer, because it sometimes had to withstand more adverse shipping conditions was about 4 per cent by weight and 5 per cent by volume."

"Don't be fooled into thinking you are getting 8 or 9 per cent beer in Canada," he continued, "even though that may be what they call it. They simply have a different way of measuring it—by proof spirits.

"Alcoholic content, under the old internal revenue law, was measured by percentage per volume (amount of alcohol in 100 c.c. of beer). Recent laws require its determination by gravity (number of grams of alcohol in 100 grams). In England and possessions it is determined by proof spirits

(*Concluded on Page 13, Column 1*)

ASRE SPEAKER DESCRIBES USE OF OIL FOR A BRINE

LOS ANGELES—Development of an oil for use as a brine in ice cream cabinets and similar applications was described by E. S. Herman on Sept. 11 before the first meeting of the season for the Los Angeles section of the American Society of Refrigerating Engineers. His subject was "Oils for Refrigeration."

The development of oil as a brine, which is still in its experimental stage, was begun several months ago by a telephone call from the Haydon Ice Cream Co., which asked if there was an oil which could take the place of brine in their ice cream cabinets. Like many other ice cream companies they had experienced considerable difficulty from brine tanks disintegrating due to the electrolytic action of the brine.

After a preliminary investigation of the problem, Mr. Herman suggested an oil which he had previously developed, known as hydraulic circulating oil to be used in the motion picture industry for operating small turbines. This oil had properties which seemed to be very near those desired, and so one cabinet was filled with the

(*Concluded on Page 13, Column 3*)

'Gangway! Let ME Look' em Over!'

Distributors of the General Household Utilities Co. crowd around the stage to see the new Grunow radios. Bill Grunow (wearing light suit) is in the exact center of the men.

BY GEORGE F. TAUBENECK - - -

Gas Heating Booms In Chicago

American Gas Association delegates, meeting next week in Chicago, will find something to interest them in addition to their convention and A Century of Progress exposition.

Home heating with gas is booming in Chicago in an almost unprecedented fashion. Combined efforts of Peoples Gas Light & Coke Co., Public Service Co. of Northern Illinois, and Western United Gas & Electric Co. are resulting in from 150 to 200 gas home heating installations a day in metropolitan Chicago.

There's a record for you!

Billboard and newspaper advertising, a strong field sales force, and low cost are doing the work. Charge for the gas is seven cents a therm; and the package burner, which fits in most furnaces, is rented without down payment at $3 per month—although at the end of nine months the customer must pay $122.50 to gain possession of the burner.

* * *

Showmanship

A hush falls over a clattery auditorium of men, stifling the noise and commotion like a blanket dropped over a family of rollicking pups.

BILL GRUNOW has ascended the stage. The first convention of General Household Utilities, held in Chicago's Lake Shore Athletic club, pauses in expectancy.

Calmly and massively Bill stamps out a cigarette, lights a fresh one, and looks knowingly at his distributors. By his manner he indicates that something of vast portent is about to occur. This will be, as showfolk would say, "terrific."

He walks across the stage, draws the cover off a radio, and pauses to admire it, inhaling deeply from his cigarette. Beautiful, that cabinet. Beautiful and simple. Has no dials or knobs. The distributors stifle their desire to applaud.

Bill picks up a small box (which would hold about a pound and a half of good candy) carries it over to a comfortable chair on the other side of the stage, and begins to play with it.

At once a soprano voice, clear and ringing, issues from the radio cabinet he has just unveiled. He twists the dial, and a throaty voice declares:

"You're never old until you feel old."

The distributors roar.

Continuing to flick the dials Bill gets:

A military band, in a bar from Sousa's "Liberty Bell" march . . . "if you would acquire an alluring personality" . . . kitchen recipes . . . a high tenor singing "Last Round-Up" . . . market quotations . . . "if you have found life with this man no longer possible" . . . dance music from a chop suey joint . . . "this is station" . . . more dance music . . . "faulty elimination" . . . announcement of a puzzle contest . . . and finally a pipe organ playing "Don't Blame Me."

Bill settles back in his chair, with an "ah-h-h," stretches his legs, and enjoys the full-throated tones of the pipe organ (he has one in his home). He turns on the volume, and the air becomes heavy with music.

Up till now he hasn't said a word. Yet practically every distributor in the house is already sold on the new line.

Bill suddenly snaps off the remote control box, jumps to his feet, and shouts:

"Damn it, fellows, that's *quality*."

That was all he needed to do. The distributors ordered 200,000 sets!

That "all he needed to do" reminds us of the time a New York sports writer wrote, "all Red Grange can do is run"; and Westbrook Pegler countered, with "yes, and all Galli-Curci can do is sing!"

'Living Tone' in Person

John Pane Gaser, leading tenor of the Chicago Civic Opera Co., appears at the General Household Utilities convention to sing with a new Grunow radio as the accompaniment.

Of all the showmen we've seen, BILL GRUNOW is No. 1 on the list.

* * *

What's Next from Wanamaker

Whether you like it or not, you'll have to admit that advertising created by DUANE WANAMAKER of the Grunow Corp. gets attention.

He has probably caused a bigger stir than any other advertising man in the industry, with the exception of General Electric's WALTER DAILY and his "Not One Cent for Service" campaign, his movie tie-ups, and his HENRY FORD broadcast.

Many readers will undoubtedly want to know what Mr. Wanamaker will be up to next. O.K. Here's something:

He has a refrigerator with a square hole cut in the door to accommodate a small movie screen. Inside the box is a small projector which throws on that screen succession of newsreel flashes, travelogue scenery, and selling material on the Grunow refrigerator. He also has a talking refrigerator which, of course, is nothing new.

He has a miniature model of a Grunow refrigerator and an American Beauty rose facsimile, packaged together in cellophane and labelled, "Two American Beauties."

His radio advertising will embody illustrations contrasting a robot and a real musician playing various musical instruments in exemplification of the theme, "living tone."

Typical Grunow radio advertising copy:

"Blindfolded! . . . Even a baby can tune a Grunow radio with the Si-lectrol. The new Grunow radio brings you Living Tone, and it actually tunes itself!"

Typical refrigerator advertising copy: "Safe! Carrene—fast-freezing refrigerant that you can SEE, SMELL, and HOLD in your hand . . . without danger or inconvenience!

"Costs Less to Operate . . . The silent Grunow is so efficient with CARRENE that it does not use as much current as an ordinary ELECTRIC LIGHT BULB operating on a 24-hour basis."

* * *

Hays MacFarland Shows Some Charts

No convention is complete without the presentation of some charts. HAYS MacFARLAND, head of the advertising agency which has the Grunow account, was the chart man at the convention.

Mr. MacFarland, a tall, handsome man of prepossessing manner and an air of conviction, was impressive indeed as he quoted figures from the U. S. Department of Commerce, McGraw-Hill, and ELECTRIC REFRIGERATION NEWS.

He said, for instance, that today there are only 15,000 "legitimate" radio dealers in the United States, as compared with 43,000 in 1925.

That stopped us.

Also he declared that between 1925 and 1929, no less than 650 concerns started to manufacture radios.

Only a handful has survived, he stated, and named Grunow, Atwater Kent, Crosley, Majestic, General Electric, Sparton, Philco, Stewart-Warner, Stromberg - Carlson, Victor - RCA, Zenith, and International.

He divided today's radio dealers into the following classifications:

Percentage of Retail Radio Sales By Types of Dealers

Radio specialty	27.7
Electrical shops	22.6
Furniture and household	9.2
Department stores	6.6
Auto supply	6.5
Mail order	6.1
Music	5.6
Hardware stores	2.3
Central station	.1
Miscellaneous	13.3

He expresses the 1933 radio market in these terms:

19,706,000 homes using electricity.
9,800,000 have modern radio.
7,000,000 obsolete sets.
2,906,000 without radios.

Thus he arrives at a figure of 9,906,000 as a sales total for the year.

* * *

Mr. Coit & the Merger

Board Chairman J. CLARK COIT and BILL GRUNOW are quite unlike. Mr. Coit is quiet, undemonstrative, diplomatic. He was president of the Radio Manufacturers Association when Bill had his famous fight with that body.

HAYS MacFARLAND brought them together. Both had made outstanding successes with previous concerns—Bill with Majestic, and Mr. Coit with Simmons Hardware. When they met one had a big radio company, the other a going young refrigeration concern.

They liked each other, and decided to get together. The combination looks interesting, to say the least.

Radios and refrigerators now; washing machines soon (they're cocky about what they'll do to that market); other appliances later, maybe.

* * *

A Bit of History

The organization of General Household Utilities and the subsequent move into the big Crawford Ave. plant, marks a third step by Mr. Grunow since he entered the field last fall.

On Oct. 6 of 1932 Mr. Grunow secured the George St. plant for the manufacture of Grunow refrigerators, utilizing carrene refrigerant. There was not a tool in the structure at the time, but by intensive work a complete manufacturing plant was put in operation in January.

Bill bought some three million dollars' worth (his estimate) of idle machinery at distress prices—for a total expenditure of $300,000 from his personal fortune! He hired a complete staff of men who had worked for him at Majestic, and got busy.

Late in February shipments were under way. A few days later there came the shock of the national bank moratorium. In spite of the ensuing demoralization and the fact that the sight draft was inoperative, Mr. Grunow continued to ship his merchandise, depending on the honor of the distributors to meet their obligations.

"I am glad to say that my faith was justified 100 per cent," Bill says.

The following summary of this company's financial position may serve to indicate its financial stability:

As of the date of the last audit report, May 31, cash on hand and U. S. government securities totaled $1,453,000 compared with $1,040,000 notes and accounts owing as of that date.

In addition, accounts receivable due from customers and inventories of raw materials, supplies and finished stock, aggregated $1,413,000, thus making a liquid working capital of $1,828,000.

The company's plants and machinery, less depreciation, conservatively carried at a value of $1,001,998, tax appraised values, at depression levels of these plants and machinery amounted to approximately $1,200,000.

* * *

Human Equation

One of Bill's statements we like tremendously. Read it, and see if you don't agree:

"Every investment, is in a rather strict sense, Betting on a Man.

"The human equation is inescapable.

"The problem in every business is men.

"Get the men and you get the profits.

"In the investment of money there is something more important than the balance sheet, cash position, bank value, or just dividend record, and that is Present Management.

"System, organization, methods, machinery are worthless, unless the men who control them are competent. Successful investors are often closer students of men and human nature than of balance sheets."

* * *

Additional Notes From Chicago

Bumped into JUD SAYRE, who has been a highly successful Kelvinator sales manager, and who soon will transfer his activities to Montgomery Ward, and confirmed the suspicion that the combined Kelvinator-Leonard output was probably the largest figure in the industry.

"Why," we asked him, "has Kelvinator done so well this year? No startling innovations in the way of product have been introduced; no special advertising campaigns have been made; no extraordinary stunts have been staged; there's nothing you can point to except old-fashioned plugging."

Jud opined that it was the high quality of the distributing organization which accounted for Kelvinator's excellent volume during the last two years. Over a period of time, he pointed out, excellent distributors and dealers have been acquired *and kept* by a policy of fair dealing. That fairness of treatment is now paying good dividends.

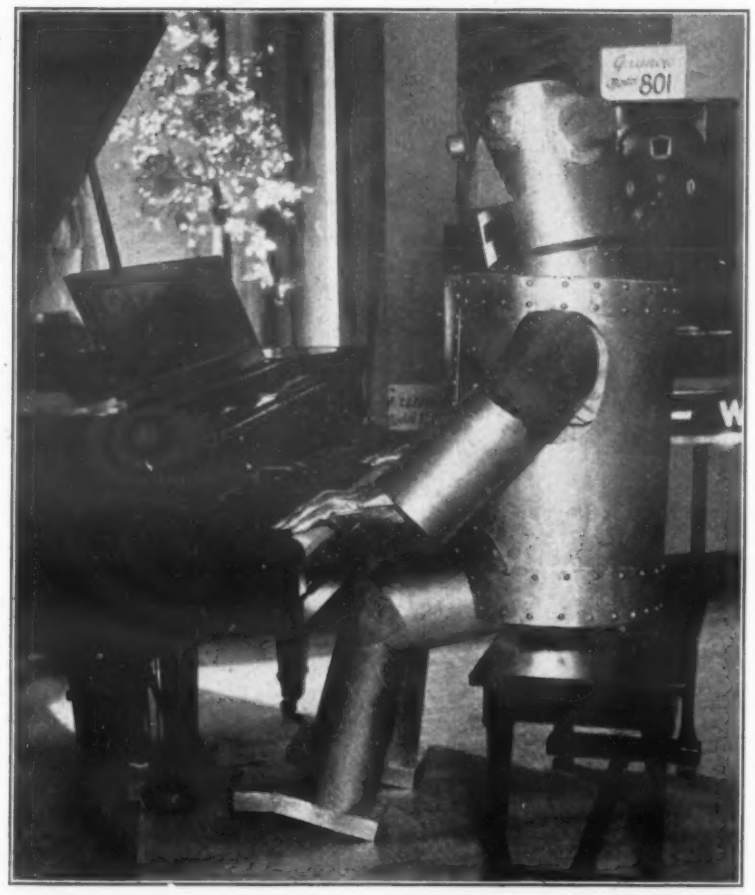
* * *

Had dinner with R. E. DENSMORE, Norge western manager, and his good-natured and good-humored wife. They were entertaining a sweet and pretty little girl from Alma, Mich. (Mary Lou Somebodyorother), who appears on all the Norge entertainment programs in and around Chicago.

As you probably know, if you read ELECTRIC REFRIGERATION NEWS, Norge distributors from various parts of the country are bringing prize-winning delegations to the World's Fair in Chicago at stated intervals.

"Denny" was in fine fettle. Norge business having been good this summer, he is enjoying a heavier ration of his frightful black cigars. Wottaman!

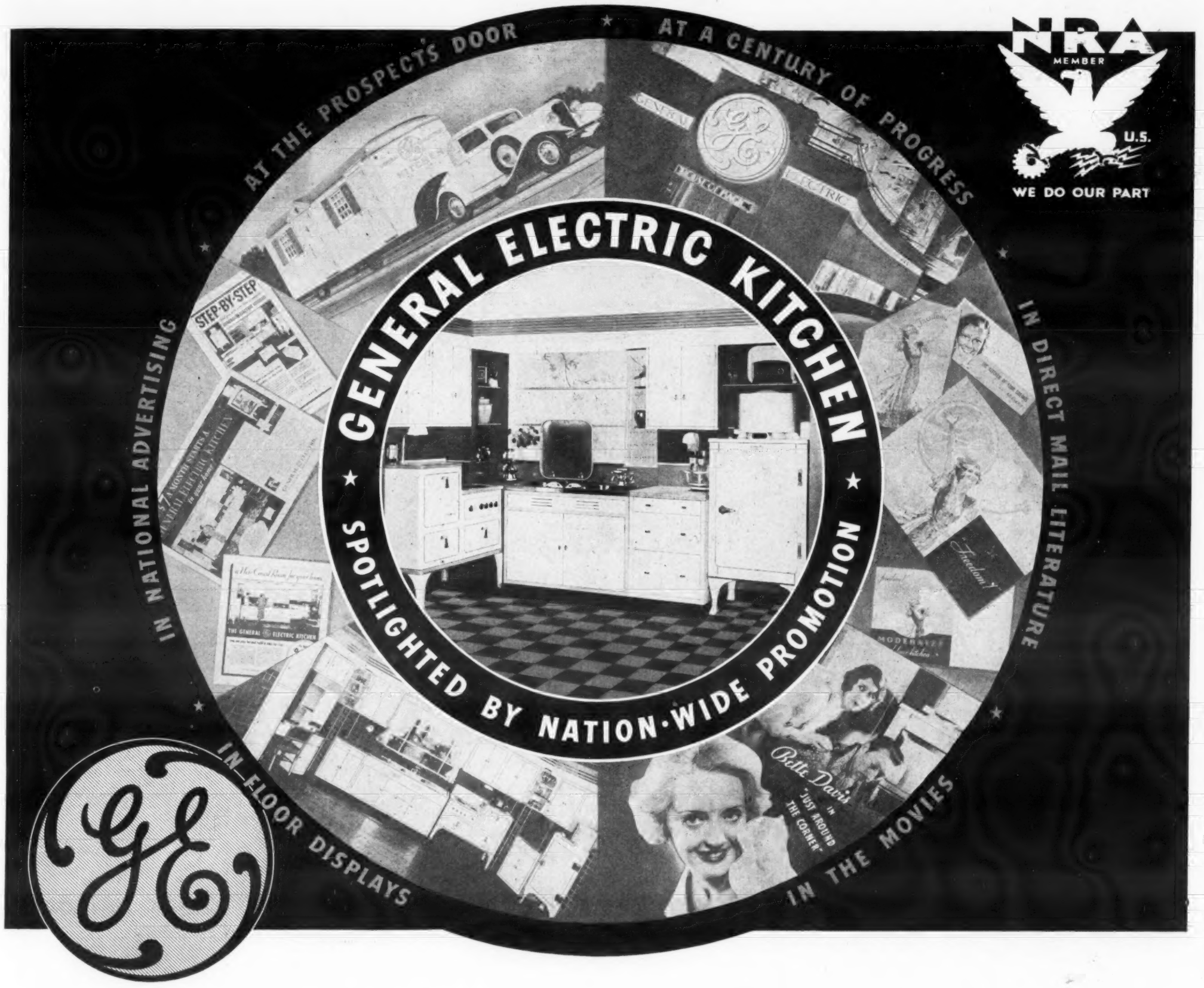
Jimmy Grunolite



No, this is not Willie Vocalite, the famed Westinghouse robot. It is Jimmy Davin, sales promotion manager of General Household Utilities, encased in a suit of armor to demonstrate the difference between "mechanical" and "living" tone in radios.

'Give 'em Hell, Dave!'

Bill Grunow gave Dave Goldman of North American Radio Co., New York City metropolitan distributor, such a large quota of radios to sell that Dave went right out and bought some working clothes.



THE STORY of the complete General Electric Kitchen is being told over and over again to the home owners of America. Hundreds of thousands of women have seen, heard or read about "the new guest room of the home"—and they want it.

This modern method of merchandising has created thousands of prospects for G-E refrigerators and the other G-E kitchen appliances which can be purchased through the G-E refrigerator dealer. It provides the retailer with *continuous* profits instead of the single profit from a one-time refrigerator sale. Prospects buy the complete General Electric Kitchen on the G-E step-by-step plan—first a refrigerator, then a range, a dishwasher, etc., or a complete G-E kitchen can be sold as a unit for as little as $600.

Open your door to the hundreds of refrigerator owners and prospective owners in your community who have heard about the complete General Electric Kitchen and want to know more about it. Mail the coupon, or write for complete information on the G-E Refrigerator dealer franchise. General Electric Company, Specialty Appliance Sales Department, Section DF92, Nela Park, Cleveland, Ohio.

GENERAL ELECTRIC
ALL-STEEL REFRIGERATOR

GENERAL ELECTRIC
WILL APPOINT
1150 NEW DEALERS
AT ONCE!

● General Electric invites dealers in open territories to get the details of the G-E refrigerator franchise and multiple-profit plan. Those measuring up to G-E standards—however large or small their display facilities may be—have an opportunity for a profitable permanent business and continuous profits.

●

SEND THIS COUPON FOR COMPLETE INFORMATION

General Electric Company, Specialty Appliance Sales Department, Section DF92, Nela Park, Cleveland, Ohio.
Send complete information on the G-E dealer franchise.

Name of Company _____

Name of Individual _____

Address _____

City or Town _____ *State* _____

Additions and Corrections to the BLUE EAGLE ROSTER *Of the Refrigeration Industry*

The following are additions and corrections to the list of companies in the refrigeration industry which are complying with the National Recovery Act. The first list was published in the Sept. 6 issue of ELECTRIC REFRIGERATION NEWS.

Ansul Chemical Co.
Marinette, Wis.
President's Re-employment Agreement.

Baldor Electric Co.
4351 Duncan Ave., St. Louis, Mo.
P.R. Agreement as modified by code of National Electrical Mfrs. Association, 155 E. 44th St., New York, N. Y.

Beaver Machine & Tool Co.
625 N. Third St., Newark, N. J.
P.R. Agreement as modified by code of National Electrical Mfrs. Association, 155 E. 44th St., New York, N. Y.

Bellaire Enamel Co., The
Box 560, Bellaire, Ohio.
P.R. Agreement as modified by code of Fabricated Metal Products Federation, Keith Bldg., Cleveland, Ohio.
(Vitreous enameled ware industry.)

Bingham Stamping & Tool Co., Inc.
1062 Post St., Toledo, Ohio.
P.R. Agreement as modified by code of Fabricated Metal Products Federation, 729 15th St. N. W., Washington, D. C.

Bridgeport Brass Co.
Bridgeport, Conn.
P.R. Agreement as modified by code of Brass & Copper Mill Products Association, Fabricated Metal Products Federation, 729 15th St. N. W., Washington, D. C.

Brown Instrument Co., The
Wayne & Roberts Aves., Philadelphia, Pa.
P.R. Agreement as modified by code of Scientific Apparatus Makers of America, Room 3014, 20 N. Wacker Drive, Chicago.

Buhring Water Purifying Co.
40 Murray St., New York, N. Y.
President's Re-employment Agreement. Code not yet decided.

Detroit Stamping Co.
3445 W. Fort St., Detroit, Mich.
P.R. Agreement as modified by code of Pressed Metal Institute, Buffalo, N. Y. Fabricated Metal Products Federation, 729 15th St. N. W., Washington, D. C.

Filtrine Mfg. Co.
51 Lexington Ave., Brooklyn, N. Y.
President's Re-employment Agreement.

Grigsby-Grunow Co.
5801 Dickens Ave., Chicago, Ill.
President's Re-employment Agreement.

Insulite Co., The
1100 Builders Exchange, Minneapolis, Minn.
P.R. Agreement as modified by code of The Insulation Board Institute, 111 W. Washington St., Chicago, Ill.

Jarrow Products Corp.
143 W. Austin Ave., Chicago, Ill.
President's Re-employment Agreement.

King Kold Corp.
23rd and Western Ave., Chicago, Ill.
President's Re-employment Agreement.

Kurz-Kasch Co., The
1415 S. Broadway St., Dayton, Ohio.
P.R. Agreement as modified by code of National Electrical Mfrs. Association, 155 E. 44th St., New York, N. Y.

McIntire Connector Co.
263 Jefferson St., Newark, N. J.
P.R. Agreement as modified by code of Transmission and Distribution Splicing Sleeve Committee Group of National Electrical Manufacturers Association, 155 E. 44th St., New York, N. Y.

McKee Glass Co.
Jeannette, Pa.
P.R. Agreement as modified by code of American Glassware Manufacturers, Inc., 316 House Bldg., Pittsburgh, Pa.

National Korectaire Co.
228 N. LaSalle St., Chicago, Ill.
President's Re-employment Agreement.

Penn Electric Switch Co.
Des Moines, Iowa.
P.R. Agreement as modified by code of Scientific Apparatus Makers of America, 20 N. Wacker Drive, Chicago, Ill.

Sparks-Withington Co.
Michigan Ave. at Horton St., Jackson, Mich.
P.R. Agreement as modified by code of National Electrical Mfrs. Association, 155 E. 44th St., New York, N. Y.

Steel or Bronze Piston Ring Corp.
546 S. Meridian St., Indianapolis, Ind.
President's Re-employment Agreement.

Sunbeam Electric Mfg. Co.
Evansville, Ind.
P.R. Agreement as modified by code of National Electrical Mfrs. Association, 155 E. 44th St., New York, N. Y.

United States Gypsum Co.
300 W. Adams St., Chicago, Ill.
P.R. Agreement as modified by code of The Insulation Board Institute, 111 W. Washington St., Chicago, Ill.

Virginia Smelting Co.
Boston, Mass.
Have signed promptly each draft of the "Code of Fair Competition for the Chemical Industries" as soon as same were prepared by the Chemical Alliance, and in the first instance by the Manufacturing Chemists Association. New conditions of wages and labor were put into effect approximately Aug. 7. We are not displaying the NRA insignia in advertisements because of serious doubt as to the technical propriety of such use until the code has been approved by the President. We are, however, complying with the code and doing everything we can to help the movement.

Williams Oil-O-Matic Heating Corp.
Bloomington, Ill.
We have signed the President's agreement to the extent of NRA consent as announced, by conforming with the substitute provisions of the code submitted for the Oil Burner Industry provided the provisions of section 7A shall not be construed to impair any constitutional rights of the undersigned.

WHALEN ADDRESSES MEETING OF RADIO DEALERS

NEW YORK CITY—Grover A. Whalen, chairman of the NRA committee here, addressed a mass meeting of radio distributors and their sales organizations gathered in the Hotel Pennsylvania ballroom Sept. 19 to discuss plans for a local radio code of fair practices.

Others on the program included Ben Gross, Stromberg-Carlson sales representative, Earl Whitehorne, and Irving Sarnoff of Bruno-New York, Inc.

Electrical Show Opens Today in New York

(Concluded from Page 1, Column 1)

munication with airplanes, form a part of these demonstrations.

How the radio short wave helps locate criminals is the basis of the New York Police Department exhibit, showing the use of radio in scout cars, harbor boats, and airplanes.

Two complete broadcasting stations take the lion's share of interest in the radio group. These are under the direction of John S. Royal, vice president and program director of the National Broadcasting Co., and Herbert B. Glover, director of news broadcasts for Columbia Broadcasting System, and will be used for special broadcasts by exhibiting manufacturers who sponsor national programs.

Program of the 11-day show, according to Director Joseph Bernhart, is as follows: Sept. 20—"Blue Eagle" day; Sept. 21—Electrical Science day; Sept. 22—Army and Navy day; Sept. 23—Lighting day; Sept. 24—Broadcasting day; Sept. 25—American Electric Home day; Sept. 26—Ironer, Washer, and Cleaner day; Sept. 27—Police day; Sept. 28—Refrigeration day; Sept. 29—Oil Heating and Air-Conditioning day; Sept. 30—Radio day.

Members of the show committee appointed by the Electrical Association of New York are Chairman D. W. May, May Radio & Television Corp.; Vice Chairman J. H. McKenna, eastern sales manager, A. J. Lindemann & Hoverson Co.; A. Lincoln Bush, treasurer, Commercial Radio Sound Co.; H. C. Calahan, New York district manager, General Electric Supply Corp.; J. J. Donovan, general manager, air-conditioning division, General Electric Co.; B. R. Gates, eastern manager Premier Vacuum Cleaner Co.; E. J. Hegarty, eastern merchandise manager, Westinghouse Electric & Mfg. Co.; E. H. Ingraham, president, Allen-Ingraham, Inc.; T. H. Joseph, president, E. J. Electric Installation Co.; H. Linde, president Triangle Radio Supply Co.; and Ralph Neumuller, managing director, Electrical Association of New York.

GAS ASSOCIATION STAGES ICE CUBE SALES CONTEST

NEW YORK CITY—Five thousand gas company sales managers and appliance salesmen in all parts of the country are now competing in an Electrolux refrigerator sales contest sponsored by the refrigeration committee of the American Gas Association in collaboration with Servel, Inc., manufacturer of Electrolux gas refrigerators.

The campaign will close Oct. 31, and prizes totalling $1,500 will be distributed among members of the three highest-ranking gas companies according to Cyrus Barnes, chairman of the A.G.A.'s refrigeration committee.

Sale of each Electrolux gives credit for a specified number of "ice cubes" to the man making the sale and to the organization of which the salesman is a member. Only installations on retail meters are counted in the contest—a retail meter being one used in a dwelling housing not more than four families.

Prize of $750 will be awarded to the gas company office, district or branch office selling the greatest number of "ice cubes" per 100 registered retail meters. Of this money, $200 will go to the local manager of the outlet, and the remaining $550 will be divided pro rata among the outlet's salesmen.

A second prize of $550 will be awarded to the runner-up in the Ice Cube Contest. Local manager will receive $150, and salesmen will receive the remainder in amounts proportionate to their respective sales during the drive.

Third place winner will get $250—$50 for the local manager, and $200 for salesmen of the company.

This is the first time that any division of the American Gas Association has collaborated with any manufacturer in promoting sales of gas appliances through members of the association, according to Mr. Barnes. As its part of the drive, Electrolux is issuing special promotional material to outlets competing in the drive.

Electrolux Cooperates With A.G.A. Contest

EVANSVILLE, Ind.—As a means of cooperating with the American Gas Association in its current "Ice Cube Contest" on sales of Electrolux refrigerators for member gas companies, Servel, Inc., the manufacturer, has prepared an "action series" of direct mail pieces to lend impetus to the remainder of the contest and continue the sales effort of gas companies through Christmas.

Three pieces comprise the series prepared for prospect mailings by gas companies taking part in the Ice Cube campaign. First is for September mailing, second for November, and third for December.

NEW BEER COOLING HANDBOOK IS READY FOR DISTRIBUTION

(Concluded from Page 1, Column 2)

tains diagrams, tables, and illustrations.

Third article describes Liquid Cooler Corp.'s Temprite beverage cooler, and lists recommendations for the servicing and care of these instantaneous coolers. Next is an explanation of the system of foam control used in all dispensing units made by the Russ Soda Fountain Co.

A discussion of novelty and coil boxes made by the Bishop & Babcock Sales Co. appears in the new manual, and gives special attention to the water bath method of cooling used in these dispensing units.

Newest developments in processes and substances for cleaning pipes and coils of beer dispensers are described in the handbook's next article. Following that is an illustrated digest on useful thermostatic valve hook-ups for draft and bottle beer coolers prepared by D. D. Wile of the Detroit Lubricator Co.'s accessories laboratory.

R. H. Guyton, refrigeration engineer of the Brunswick-Balke-Collender Co., is author of another of the book's articles. In it, he discusses the problem of obtaining proper pressure in draft beer dispensing units, and describes features of air pumps and carbonic gas systems used in modern coolers.

A step-by-step explanation of processes used in the manufacture of beer at the Anheuser-Busch brewery in St. Louis has been prepared by that company's brewmasters and appears in the book. At the end of the discussion are listed the brewers' instructions on how to serve beer, and how *not* to serve it.

Following these articles is the directory of manufacturers of draft and bottle beer coolers and beer-cooling units. Name and address of each manufacturer are listed according to which of these products that company makes.

One page of the handbook is devoted to a listing of the officers, directors, and members of the National Beverage Dispensing Association.

The directory of manufacturers of pumps, refrigerating machines, and parts for beer-cooling systems—which comes next in the book—includes alphabetized lists of makers of air pressure gauges, air pressure regulators, beer faucets, beer pipe cleaners, beer pumps, beer taps, carbonic gas regulators, fittings, rubber pipe connections, and commercial refrigeration units.

Twenty-seven pages are devoted to the listing of specifications on 52 makes of draft beer dispensing equipment. Information in this section includes data on dimensions, capacities, method of cooling, and parts used in each make. A descriptive paragraph at the beginning of each compilation will give the reader a general idea of the appearance and type of that unit.

Specifications on 18 makes of bottle beer coolers occupy six pages, the method of presenting the data being much the same as for draft coolers.

Last feature of the book's contents is a 10-page resume of laws governing the sale of beer in 36 states. The directory has a complete table of contents and indices for specifications of draft and bottle beer coolers.

The manual is being offered free to subscribers of ELECTRIC REFRIGERATION NEWS and REFRIGERATED FOOD NEWS with new and renewal orders. Single copies are 35 cents. The following prices apply to bulk orders: 3 copies, $1.00; 10 copies, $3.00; 20 copies, $5.00; 50 copies, $10.00; 100 copies, $17.50.

CALIFORNIA DISTRIBUTOR LEADS MASTER BUILDERS

MANSFIELD, Ohio—With one week of sales effort remaining, the Westinghouse distributor organization has sold 103 per cent of its national quota in the Master Builders refrigerator sales contest, according to R. O. Richards of the merchandising advertising department here.

Up to Sept. 12, 182 salesmen had accumulated the 700 building credits which entitle them to the name of Master Builders.

Los Angeles Westinghouse Electric Supply Co. is maintaining its lead in the distributors' race, having a quota record of 215.1 per cent, while the Middle Atlantic district is out-striding other sections of the country with 122.7 per cent.

Close behind WESCO in Los Angeles are nine other distributors, led by Edgar Morris Sales Co., Washington, D. C., which has sold 198.1 per cent of its quota. The other eight are LaMotte & Calloway, San Diego, Calif., 185.4 per cent; Monroe Hardware Co., Monroe, La., 183.1; Tafel Refrigeration Co., Inc., Cincinnati, 178.6; Wetmore-Savage Electric Supply Co., Boston, 163.8; Westinghouse Electric Supply Co., San Francisco, 158.1; Hawaiian Electric Co., Honolulu, T. H., 156; Danforth Refrigeration Co., Cleveland, 151.1; American Sales Co., Columbus, 151.1.

The SHELVADOR
U. S. Patent 1,808,922

With dramatic suddenness, the country deluged Crosley with demands for Shelvador. There is no recent parallel to this demand. In all refrigeration history there is no comparable instance of the growth of an idea.

... only the NEW CROSLEY Electric REFRIGERATOR has it!

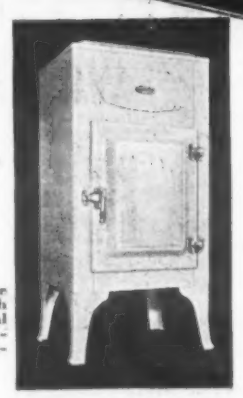
$89.50
DELIVERED, INSTALLED, ONE YEAR'S FREE SERVICE

Model D-35
(Illustrated Above)
3½ cu. ft. NET capacity; 8 sq. ft. of shelf space (N. E. M. A. rating). Has two ice trays, each with capacity of 21 ice cubes—42 cubes in all. Additional space for extra single or double depth tray. 3" insulation at top, sides, bottom and in door. Dimensions: 50⅝" high, 23⅞" wide, 24" deep.

Model D-45
(Not Illustrated)
4½ cu. ft. NET capacity; 10.6 sq. ft. shelf space (N. E. M. A. rating). Three ice trays, each with capacity of 21 ice cubes, 63 cubes in all. Additional space for extra single or double depth tray. 3" insulation at top, sides, bottom and in door. Dimensions: 56⅞" high, 23⅞" wide, 24" deep..... $99.50

Model D-60
(Not Illustrated)
6 cu. ft. NET capacity; 11.5 sq. ft. shelf space (N. E. M. A. rating). Has three standard size ice trays, each with capacity of 21 ice cubes, 63 cubes in all, and one double depth tray for freezing desserts. 3½" insulation at top, sides, bottom and in door. Dimensions: 57½" high, 29½" wide, 25⅞" deep. $130.00

Remember the inside of Shelvador is recessed to provide for the shelves. The exterior of the door is bulged outward, improving the appearance of the refrigerator and providing space for even more insulation than in ordinary doors.



FAMOUS in a day. That's the story of SHELVADOR. Before the SHELVADOR, the Crosley Electric Refrigerator was establishing itself in public favor by reason of its quality and value. It would ultimately have reached leadership in this field. But SHELVADOR came and swept the Crosley Electric Refrigerator to leadership almost instantly. Dealers everywhere were swamped with sales. The factory was overwhelmed with orders. The reasons are simple enough: the Crosley Electric Refrigerator is the best dollar-for-dollar value in its field; the SHELVADOR is something *everybody* wants!

Hunting for small things in the refrigerator is no longer in style. SHELVADOR makes it unnecessary. Shelves in the door are for small things that don't require much head-room but that take up as much shelf space as taller items. For example, in an ordinary refrigerator an orange takes up as much shelf-room as a bottle of milk. In the SHELVADOR it takes only as much room as an orange should.

Surely no housewife who understands what SHELVADOR means will want an electric refrigerator without SHELVADOR. Nobody likes to get small things from the refrigerator by the "reach, feel, and hunt" method. Now—with SHELVADOR, the housewife just opens the door . . . and *there* it is!

Only Crosley Electric Refrigerators can use SHELVADOR, for it is an exclusive, patented Crosley feature. For the housewife to buy a refrigerator without SHELVADOR is to deny herself a great convenience as well as to buy something already out-dated.

See your Crosley distributor. Study every feature. Note the quality. Let the prices speak for themselves. Examine the SHELVADOR. Instantly you will see its advantages. At once you will realize why the New Crosley SHELVADOR Electric Refrigerators are sweeping competition before them.

Montana, Wyoming, Colorado, New Mexico and west, prices slightly higher.

The Crosley Radio Corporation - Cincinnati
(Pioneer Manufacturers of Radio Receiving Sets)
Powel Crosley, Jr., *President* Home of "*the Nation's Station*"—WLW

ALL PRICES INCLUDE DELIVERY..INSTALLATION..ONE YEAR FREE SERVICE

CROSLEY SHELVADOR
Electric REFRIGERATOR

"My! how the child has grown!"

KELVINATOR DE LUXE LINE SHOWS 909% INCREASE IN 1933!

WHILE the other Kelvinator "children"—the low-priced "R" line and the medium-priced "PK" line—showed a 64% increase ror the first 11 months of the fiscal year of 1933 over 1932, the favorite "child," the famous De Luxe line, showed the remarkable gain of 909% *for the same period.* And during the months of May, June, July—the peak selling season—*nineteen times* as many people bought the higher-priced De Luxe models as in the same period last year—and this period of 1932 set a new, all-time high record for De Luxe sales.

These figures show, unmistakably, the trend away from price and toward *quality buying.* Likewise, they show the tremendously increasing demand for "4 refrigerators in 1"—that exclusive Kelvinator feature which makes a Kelvinator the *most desirable electric refrigerator on the market.*

Of course, Kelvinator dealers made bigger profits from these higher unit sales. And they will make still more next year, and in 1935 and in 1936, as more and more people learn the *true value* of "4 refrigerators in 1." Now, even more so than ever, is the time to *come with Kelvinator.* Wire or write to-day. KELVINATOR CORPORATION, *14250 Plymouth Road, Detroit, Michigan. Factories also in London, Ontario, and London, England.*

750

Kelvinator

Distributors Enjoy 'All Play, No Work' At First Gibson Encampment

(*Concluded from Page 1, Column 1*)

westward to the camp which is concealed from the road by a mile of dense woods.

As the caravan entered the camping grounds, the visitors saw some 30 sailor-suited boys—members of Grand Rapids' Sea Scout band—playing a march number for all they were worth, saw two leather-chapped cowboys racing about and shooting blank cartridges at the sky, saw Ed Cheetham, Gibson's commercial manager, clad in plaid kilts, doing his stuff as one of the camp's official greeters.

In less than 10 minutes, practically every man present was busily engaged at amusing himself in his favorite sport. Quite a number of the men set off immediately for the golf course at Whitehall three miles away. A few went for a dip in tree-lined Duck Lake.

Take Ride in Speedboat

Others waited their turn for a fast ride in C. J. Gibson's 32-hp. Hooton water speedster. Several went down in the valley for a bit of instruction in archery from the camp's bow and arrow man. Others tried their skill at shuffle board on the porch of the mess hall.

Horse shoe pitching took the attention of a score of men. Baseball lovers got under way with a couple of fast games. A pair of dealers found a quiet spot on the lake and reeled out their fish lines. Several men did some plain and fancy shooting with a .22-calibre rifle.

A dozen men—less athletically inclined than their fellows—immediately went about the business of stuffing nickels in the six slot machines at camp headquarters. This was the start of an almost unceasing three-day experiment to determine the profit possibilities of such coin devices.

For those men lacking either the stamina or the inclination for the above diversions, two pastimes remained: They could sip the new 3.2 from one of the two Gibson beer coolers at the camp, or they could sit in comfortable chairs at the lake's edge and watch the antics of those Gibson men who had a yen for surfboarding, but apparently lacked experience at the sport.

Shortly after 7 o'clock supper was served in the mess hall. Afterward, President C. J. Gibson welcomed the men to the camp, thanked them for their work during the past season, said that Gibson sales this year have doubled those of last season.

Sales Counsel Talks

Frank S. Gibson made a few welcoming remarks, then introduced A. P. Johnson, sales counsel of the Grand Rapids Furniture Association, who spoke for not more than six or seven minutes—remembering that he had been "specifically instructed not to talk business."

He commended the Gibsons for their "friendly" way of doing business, spoke favorably of "the vigor and fearlessness with which the electric refrigeration industry conducted itself through the country's recent financial difficulties."

Closing remarks: "No one knows what the economic future of this country will be. We have laid aside most of the business principles which our individualistic society has followed. But even if the New Deal does not work, Americans will continue to improve their homes, and the refrigeration industry will still have a market.

"And if the New Deal *does* work—well, you just won't be able to make electric refrigerators fast enough."

After supper, the 150 Gibsonians picked up their chairs and walked back among the trees to where a ring had been erected for a wrestling match and a half-dozen boxing exhibitions by western Michigan fighters.

There were no official decisions made on the bouts, but the Gibson men were permitted to keep their own scores and make their own decisions, which they did—announcing them at the tops of their voices during and after each fight.

Unscheduled Fights

Between rounds, several unscheduled battles took place—most of them between Laughing Elmer Born, Gibson service manager, and Tireless H. D. MacRae, Rochester, N. Y. distributor who at the close of the camp received a prize for being the "biggest pest during the entire three days."

Remainder of the evening was spent in the camp's assembly hall, with practically everyone present indulging in the after-banquet pastime common at many distributor-dealer conventions.

Then came bedtime.

Notice had been given that taps would be sounded "on or about 3 o'clock in the morning," but some felt too tired to wait for that particular bugle concert, and so trudged up the hill from the assembly hall and toward their tents several hundred feet across the parade grounds.

Night Air Too Cool

Upon reaching their tents, quite a few of the early-to-bedders were strongly moved to change their minds and rejoin the crowd around the hall's great fireplace. Reason: the disturbingly low temperature of the night air.

Shouts heard from various tents along Refrigeration Row between midnight and 2 a. m. indicated that bumper crops of goose pimples were being produced, that some distributors and dealers planned to substitute topcoats for pajamas the following night.

Promptly at 7 o'clock the following morning, a bright-eyed bugle-boy, with 30 wide-awake bandboys to back him up, sounded reveille.

The crowd of refrigerator men which emerged from the tents 15 minutes later for flag-raising was not marked by the same display of exuberant energy as that of the band, but after breakfast the campers definitely came to life, and began a full day of competitive sports events.

Respected visitor at camp the second day was 79-year-old John Lewis, Gibson vice president, who wore on his lapel a card labeled "Oldest active refrigerator executive in the world."

A guest at the supper on the second day was J. S. Christenson, head of Greenville's glove factory, and a personal friend of C. J. Gibson. During the meal he told the assemblage that the first Gibson electric refrigerator to come off the production line was placed in his home, is still ooperating satisfactorily.

Other one-minute speakers at the supper were Herbert Young, eastern manager, L. E. Taufenbach, western manager, and E. H. McCarthy, midwest manager—all of whom said that "the company's plans for the future are 99 per cent complete."

Solicits Suggestions

Fred Tarleton, assistant chief engineer, solicited criticism and suggestions from dealers and distributors at all times. Paul Krich, Newark distributor, who brought the most delaers to the convention, did a bit of story-telling, after which a number of Gibson's leading distributors were officially introduced to the others present.

At the request of several dealers, Charles Horowitz, Gibson export manager, gave a brief outline of the company's export activities, and said that during July and August, shipments were made to the following countries:

Portoguese East Africa, Zanzibar, Italy, India, France, Argentina, Colombia, Morocco, British South Africa, Hawaii, Jamaica, Dutch West Indies, China, Trinidad, Java, Holland, Rhodesia, Mexico, Norway, Philippines, Brazil, and French West Indies.

Program of Entertainment

After the evening meal, the Gibson men were entertained first by members of the Sea Scout band, then by Chicago's Hart Sisters, song-and-dance team; Mary Kidder, songstress; Maurice and Vincent, burlesque acrobats; Jack and Gene, accordion and guitar team; Ralph Foote, pianist; Slim Coates, fancy rope man; and Jimmie K. Thompson, magician and master of ceremonies.

On the third and last day, F. A. Delano, assistant to the vice president and director of the camp, and W. R. Marshall, advertising and sales promotion manager, awarded prizes to dealers and distributors who won high and low places in the organized sports events which were in charge of Allen W. Church, Grand Rapids advertising agency head. Following are the events and their winners:

Win Golf Prizes

Golf—Low score on seventh and seventeenth holes, E. C. Sonfield, Brooklyn; low score on even holes, William S. Polk, Battle Creek, Mich.; highest score on any hole, H. D. Bugg, Chicago; "dubs' delight" (high score for 18 holes), Chet Roberts, Chicago.

Longest drive (223 yds.), B. M. Gallagher, Claire, Mich.; shortest drive, H. E. DeRoque, Chicago; low putting score, H. Motheral, Arlington, N. J.; "goofy golf" (handicaps of all sorts), B. M. Gallagher and M. B. Gallagher, Claire, Mich.; low thirteenth hole, J. J. Sullivan, Whitehall, N. Y.

Low total foursome, B. M. and M. B. Gallagher, F. L. Larry of Lapeer, Mich.; D. W. Uphoff of Saginaw, Mich.; blind bogey, A. Swire, Brooklyn; low medal score, W. S. Polk, Battle Creek.

Distributors Take Crown

Baseball—(distributors' team victorious over dealer and factory teams) Paul Krich, Newark; J. W. Prebola, Rochester, N. Y.; Adolph Fox, New York City; Oliver Grenzbach, St. Louis; Carl Clinkenbeard, St. Louis; H. E. DeRoque, Chicago; Harold Rietz, Milwaukee; D. L. Charal, New York City; Max Hegleman, Albany, N. Y.

Volley ball—Messrs. Peters, Alex Jones, Michael Christensen, Frank Costello, Wilson, and Terry.

Horse shoes—(singles) Roy M. Boyle, Ogden, Utah; C. M. Brown, Gibson production department, Greenville; (doubles) Roy Boyle and J. H. Valentine of Salt Lake City; runners up were J. W. Prebola of Rochester, N. Y., and L. A. Austin, Auburn, N. Y.

Grows Largest Beard

Prize for the man having the longest beard went to John Wood of New York City. Prize for being the biggest camp pest was won by Distributor McRae in the face of heavy competition from Service Manager Born.

Oldest man at the convention was Vice President John Lewis. Youngest was 25-year-old H. T. Lennon, refrigeration manager of Sonne Bros., Inc., Gibson dealer in Utica, N. Y. Man who traveled farthest to attend the camp was Dealer A. J. Parenti of Bakersfield, Calif.

Camp was broken shortly after lunch on Wednesday, and most of the dealers and distributors were taken to Whitehall, Mich. to board a special train leaving for Chicago. Before the camp ended, it was voted unanimously to hold another similar affair next year.

Those Present

Dealers and distributors present were:

Frank Allen, Quality Store, Ionia, Mich.; W. L. Anderson, Louis Buehn Co., Philadelphia; Lewis A. Austin, Austin Electric Co., Auburn, N. Y.; Mr. Barrett, H. E. DeRoque, R. A. Paxton, and L. V. Whitney, L. V. Whitney, Inc., Chicago; Roy Belnap, United Press Sales Service Co., Chicago.

P. R. Besserman and D. L. Charal, P. R. Besserman & Co., New York City; Roy M. Boyle, Boyle Furniture Co., Ogden, Utah; Waldo Bruske, Bruske Hardware Co., Saginaw; L. E. Buetow, Harry Lee, O. G. Scholtz, and D. W. Uphoff, Morley Bros., Saginaw, Mich.; Harold D. Bugg, Bugg & McGowan, Chicago.

J. M. Calgut, A. Fox, H. A. Glasser, M. W. Infield, Edwin C. Sonfield, and John Wood, Bruno-New York, Inc., New York City; L. P. Canty, Radio Merchant, Chicago; Carl Clinkenbeard, Artophone Corp., St. Louis; O. E. Chytraus, Appliance Distributors, Salt Lake City; H. F. Cook, A. H. Edson, and G. A. Peigrim, Bay View Furniture Co., Holland, Mich.

E. A. Corpron, Corpron Hardware, Cass City, Mich.; A. M. Craig and Samuel Horner, Craig-Horner Electric Co., Hightstown, N. J.; J. J. Crowley, Tri-State Distributing Co., Cincinnati; Isaac Dornbos, Dornbos Co., Grand Haven, Mich.; G. A. Dixon, Dix-Bowers Co., Norfolk, Va.; L. F. Duholm, L. F. Duholm Co., Austin, Minn.

J. M. Elwell, Jr., J. M. Elwell Co., Bridgeton, N. J.; Emanuel Ettelson, Lake Shore Radio Co., Chicago; J. S. Barr, Allied Refrigerator Service Co., New York City; Nate Friedberg, Nate Friedberg, Inc., Brooklyn.

M. G. Freije, Freije Electric Supply Co., Binghampton, N. Y.; E. D. Fuller, Scholtz & Fuller, Saginaw; M. B. Gallagher and B. M. Gallagher, Claire Hardware & Furniture Co., Claire, Mich.; Morris Gasman, I. Gasman, Inc., Hoboken, N. J.; Oliver Grenzebach, Central Music Co., St. Louis.

H. A. Hawn, Consolidated Equipment Co., Greenville; Max Haggleman, Capital City Distributing Co., Albany, N. Y.; A. F. Jones, J., Alex F. Jones Co., Syracuse, N. Y.; W. B. Kella, Midwest Radio & Electric Co., Topeka, Kan.; H. F. Kezis and G. A. Nickrash, People's Furniture Co., Chicago.

J. W. Kelley, Progress Furniture Co., Chicago; F. T. Krasa, Altenburg Music House, Union, N. J.; Moe Kreisel, Kreisel Furniture Co., Newburgh, N. Y.; P. R. Krich, Krich Distributing Co., Newark; S. H. Kroungold, A. Kroungold Sons, Philadelphia; G. K. Ladd, Albany Builders Supply Co., Albany, N. Y.

F. L. Larry, Lapeer Hardware Co., Lapeer, Mich.; H. T. Lennon, Sonne Brothers, Inc., Utica, N. Y.; Kurt Leonhurdt and Henry G. Morehouse, Altenburg Piano House, Elizabeth, N. J.; Robert McConnell, McConnell's Easy Washer Co., Scranton, Pa.; H. D. MacRae, H. D. MacRae, Inc., Rochester, N. Y.

Vernon Merriken, Home Furnishing Co., Kalamazoo, Mich.; Charles Morrison, C. T. Morrison & Co., New York City; Clarence Massoll, Massoll's Garage, Reese, Mich.; H. Motheral, Arlington, N. J.; J. T. Mulcahy, Luckey-Platt & Co., Poughkeepsie, N. Y.; A. Nutkiss, National Piano & Furniture Co., Jersey City, N. J.

A. J. Parenti, Parenti Co., Bakersfield, Calif.; H. D. Parke, Walter Russell, Houston-Starr Co., Pittsburgh; Ed Paszamant, Paszamant & Co., New Brunswick, N. J.; W. S. Polk, East End Appliance Co., Battle Creek, Mich.; W. J. Ponath, Ponath Radio Co., Philadelphia; R. V. Prochazka, K & M Radio Co., Berwyn.

David Prothero, Norcross Cooperative Oil Association, Norcross, Minn.; J. H. Phillips, Pittsburgh; J. W. Prebola, Rochester; C. E. Rann, Rann & Hart, Perry, Mich.; H. Rietz, A. J. Rouleaux, C. Sievert, R. L. Stephens, and Charles E. Turnock, Charles E. Turnock Co., Milwaukee; Chet Roberts, Chicago.

Glenn Ryder, Glenn Ryder Co., Worcester, N. Y.; C. J. E. Stauffer, Reinhart Radio Co., Philadelphia; Jack Stone, George A. Clark & Sons, Inc., Minneapolis; J. J. Sullivan, Whitehall, N. Y.; A. Swire, Swire Brothers, Brooklyn; A. S. Thomson, Thomson & Vannington, Englewood, N. J.

J. H. Valentine, Valentine Appliance Co., Salt Lake City; Albert L. White, McConnell's Easy Washer Co., Chisechilla, Pa.; William Wytrykus, Your Own Radio Co., Chicago; Adam Webb, Wellston Furniture Co., St. Louis; Frank A. Walsh, Union May Stern Co., St. Louis; Victor Zarich, Zarich Electric Service Co., Hibling, Minn.

NRA SETS HEARING DATE FOR VALVE MAKERS CODE

WASHINGTON, D. C.—Public hearings on a code of fair competition for the valve and fittings manufacturing industry, filed by the Valve and Fittings Institute, claiming to represent 94 per cent of the industry, were scheduled to be held here Monday, Sept. 18.

The code provides for a maximum work week of 40 hours, except in emergencies. Executives and those in technical capacities receiving more than $35 a week are excluded. For overtime work, the workers are to get time and one-third.

It also provides for a minimum wage of $15 a week in cities of 500,000 population, scaled down to $12 a week in towns of less than 2,500 population, with a provision that office boys and girls and learners shall receive not less than 80 per cent of the minimum. The minimum rate for factory workers and similar classifications is 40 cents an hour unless the rate was lower on July 15, 1929, and in no event less than 30 cents an hour.

AVERAGE A SALE A DAY

OKLAHOMA CITY—Since beginning sale of Electrolux air-cooled refrigerators in April, the Harbour-Longmire Co., dealer here, has averaged more than a sale a day up to the present time, according to Electrolux officials.

▶ Whistles are Blowing Again
▶ Men are Going Back to Work
▶ Shorter Hours and Higher Wages
▶ Retail Sales are Up
▶ Business from Coast to Coast is

Going Strong!

AND SO ARE
GIBSON
REFRIGERATORS

HERE'S ONE REASON

Here is the refrigerator America has waited for—Gibson model LG-53. A tremendous new market is opened. Thousands and thousands of families can easily afford this model. And they are ready to buy. They have been planning and saving for an electric refrigerator and now they can have it immediately.

A beautiful roomy, standard make, finest quality refrigerator. Powered by the famous Gibson twin cylinder MonoUnit, 12 point temperature control, foot pedal door opener and interior light. An amazingly low price. Unparalleled value.

Get the details at once on the LG-53 and other Gibson models. A Gibson franchise has a steadily increasing value.

Visit the Gibson Display at Electrical Exhibit, Madison Square Gardens, New York City, Sept. 20-30

MORE REASONS

The complete Gibson line includes nine models of electric refrigerators, three models of the KeroUnit refrigerators (Kerosene burning, absorption type), water coolers, draught and bottled beer coolers and commercial equipment for every requirement.

NRA MEMBER U.S. WE DO OUR PART

GIBSON ELECTRIC REFRIGERATOR CORP.
Greenville-Michigan

ATTENTION

Refrigeration Dealers!

—this spectacular double-page "spread" in the Saturday Evening Post, Sept. 23, is aimed right down your alley

Majestic presents 1934's finest radios
revolutionized by Duo-Valve Self-Shielded Tubes!
HERE you have the "Smart Set" of Radio . . . some of the sixteen new Majestics for 1934. The best-looking sets you have ever seen. The Mighty Monarch of the Air in a stunning new dress. Majestic's famous colorful tone further enriched in quality. With a far-reaching new development—Duo-Valve Self-Shielded tubes!..
Somebody who knew design created these distinguished, original radios. You are instantly struck by the absence of "gingerbready" over-decoration; the refreshing way in which fine woods have been left to speak for themselves, their unspoiled beauty revealed by patient hand-rubbing to a true piano finish.
And—what a difference you hear! Performance, in these new Majestics, is astonishingly "stepped up" by Duo-Valve circuiting. Through the use of Majestic Duo-Valve Self-Shielded tubes, the efficiency of at least two extra tubes is added to every set!
An ordinary 6-tube radio is a 6-tube radio—and that is all. But a 6-tube Majestic "Smart Set" is an 8-tube radio—33⅓ per cent more for your money! A Majestic Duo-Valve tube does the work of two ordinary tubes—functions twice in the Majestic Duo-Valve circuit—and functions better. That is a simple statement of engineering fact.
Here is another engineering fact: these new Majestics definitely obsolete twelve million present-day radios! Sets costing, less than a year ago, three or four times as much, are not merely out-moded, they are outperformed. In power, in tone, in selectivity, in a range that captures even police calls—the Majestic "Smart Set" is a finer instrument!
It gets more out of the air! Stations you never heard of step right up beside your favorite "locals." Tones you've been missing—tones muddied by the dull "boom, boom," of older radios—are filtered clear and sweet as spring-water...
There is nothing nearly so fine, we honestly believe, in all the world of radio today. Drop in at a Majestic dealer's and see if we are not right!
New-Self-Shielded Tubes!
In addition to the double-duty Duo-Valve tubes, all these "Smart Sets" employ the new, exclusive Majestic Self Shielded tubes—perfectly shielded by metal fused directly on the glass . . . for superlative reception!
Majestic Duo-Chief
LITTLE GIRLS HAVE AIR RIGHTS TOO
THESE LITTLE SETS ARE ADVENTURES!
Majestic Studio
Majestic Royale
MODERN CHARM—A HINT OF CHINESE CHIPPENDALE—AND HALF THE PRICE YOU'RE GUESSING!
Majestic Master Six
JUST AS SMART AS "SMART" CAN BE
The "Smart Set" of Radio
A DASHING, FLASHING LITTLE CAT—
Majestic Century Six
AS FINE AND CAPABLE AS A NEW SPORT-MODEL ROADSTER
Majestic Twin-Six
THERE'S COMPANY! THE MAJESTIC TWIN-SIX CAR RADIO—AND YOU
Majestic Radios are Standard Equipment on all Essex Terraplane De Luxe Models
The SMART SET Majestic RADIO

A LOT of Refrigeration Dealers are going to see this big opportunity—and grab it! Some others are going to let it slip right by.

It's the opportunity to sell Majestic Radio. The new Majestic line is the sensation of the trade. Christened the "Smart Set" of Radio, it has everybody talking, praising.

The new Majestic models are the best-looking radios, the best-performing radios, ever offered the American Public. They have the new, exclusive Majestic *Duo-Valve* Self-Shielded tubes, adding the efficiency of at least two extra tubes to every set.

And they are backed by the smartest radio advertising ever published. The Saturday Evening Post double-page "spread," shown above in reduced size, is a sample. Look for it in the issue of Sept. 23, out Sept. 19. Look for another in Collier's for Oct. 7, out Sept. 29. Look in Time and The New Yorker.

Majestic's sensational new radios for 1934 are going to lead the sales parade—and why shouldn't *you* be marching right along with the procession?

Your refrigeration customers are the best of Majestic Radio prospects. They are "in the market" for better home equipment. And they know that the Majestic name means quality and value.

The radio business is a fine "filler in" of valleys in the sales curve. It helps keep volume level at all seasons. That's an ideal set-up for the dealer who wants to keep his sales *up* and his overhead *down* twelve months out of twelve!

If you *aren't* selling Majestic Radio, the time to start is *now* when Majestic's powerful advertising campaign is making millions of prospects more keenly interested in buying new radios than they have been since the days of '29.

We advise you to *do something* about this. Write us or the nearest Majestic distributor, as listed below.

The SMART SET Majestic

GRIGSBY-GRUNOW COMPANY
5801 Dickens Ave., Chicago

Licensed under patents and applications of R.C.A., Hazeltine, and La Tour

WRITE, WIRE, OR PHONE ONE OF THESE MAJESTIC RADIO DISTRIBUTORS

ALBANY, N. Y.
Ignition Service & Supply Co.
16 Central Ave.

ALEXANDRIA, LA.
Hemenway, Incorporated
1222 Third St.

ATLANTA, GA.
Capital Electric Co.
393 Peachtree St.

BALTIMORE, MD.
Jos. M. Zamoiski Co.
111 W. Redwood St.

BILLINGS, MONT.
Midland Distributing Co.
2301 Montana Ave.

BIRMINGHAM, ALA.
Capital Electric Co.
8 South 13th St.

BOSTON, MASS.
Howe & Company
841 Boylston St.

BUFFALO, N. Y.
H. D. Taylor Co.
101 Oak St.

CHARLOTTE, N. C.
Shaw Distributing Co.
205 W. First St.

CHICAGO, ILL.
Northern Ill. Div.
Grigsby-Grunow Co.
43 E. Wacker Drive.

CINCINNATI, OHIO
Schuster Electric Co.
2169 Spring Grove Ave.

COLUMBUS, OHIO
Chas. T. Naddy Co.
85 E. Long Street

DALLAS, TEX.
J. P. Awalt & Co.
811 Elm Street

DAVENPORT, IA.
Midwest-Timmermann Co.
114 Western Ave.

DES MOINES, IA.
Midwest-Timmermann Co.
118 Tenth Street.

DENVER, COLO.
Harry Moll, Inc.
744 Fourteenth St.

DETROIT, MICH.
Michigan Majestic, Inc.
101 East Jefferson Ave.

DUBUQUE, IA.
Midwest-Timmermann Co.
727 Iowa Street

EL CENTRO, CAL.
Imperial Valley Hdwe. Co.
El Centro, Cal.

EL PASO, TEXAS
American Furn. Co.
Stanton St. at Texas

ERIE, PA.
Erie Radio Supply Co.
28 West Ninth St.

ESCANABA, MICH.
Delta Hdwe. Co.
400 Ludington Street

GRAND RAPIDS, MICH.
J. A. White Dist. Co.
234 Ottawa Ave., N. W.

HARTFORD, CONN.
Stern & Company, Inc.
210 Chapel Street

HOUSTON, TEXAS
Star Elec. & Eng. Co.
613 Fannin Street

HUNTINGTON, W. VA.
Air-Ola Radio Co., Inc.
712 Eighth Ave.

INDIANAPOLIS, IND.
State Radio Co.
316 N. Illinois Street

JACKSONVILLE, FLA.
Sou. Hdwe. & Bicycle Co.
2336 Liberty Street

KANSAS CITY, MO.
Jenkins Music Co.
1217 Walnut Street

LINCOLN, NEBR.
R. S. Proudfit Co.
720 "O" Street

LITTLE ROCK, ARK.
Voss-Hutton Co.
400 West 6th Street

LOS ANGELES, CAL.
California Majestic, Inc.
3430 South Hill St.

LOUISVILLE, KY.
Otis Hidden Co.
Main Street at 6th

MEMPHIS, TENN.
W. B. Davis Elec. Supply Co.
661 Jefferson Ave.

MILWAUKEE, WIS.
John Pritzlaff Hdwe. Co.
333 N. Plankinton Ave.

MINNEAPOLIS, MINN.
F. C. Hayer Co.
106 Third Ave. North

MONROE, LA.
Monroe Auto & Supply Co.
Washington & Walnut Sts.

NASHVILLE, TENN.
Nashville Chair Co.
309 South First St.

NEWARK, N. J.
E. M. Wilson & Son
11 Lafayette Street

NEW ORLEANS, LA.
Modern Appl. & Supply Co.
4300 Washington Ave.

NEW YORK CITY
Majestic New York, Inc.
387 Fourth Ave.

NORFOLK, VA.
Woodhouse Elec. Co., Inc.
238 Court Street

OKLAHOMA CITY, OKLA.
Harbour-Longmire Co.
418 W. Main Street

OMAHA, NEBR.
R. S. Proudfit Co.
1107 Howard Street

PHILADELPHIA, PA.
Peirce-Phelps, Inc.
437 N. 5th Street

PHOENIX, ARIZ.
Carpenter & Ross
19 N. Third Ave.

PITTSBURGH, PA.
Hamburg Bros.
963 Liberty Ave.

PORTLAND, ORE.
The Cronin Co.
404 N. E. Tenth Ave.

ROCHESTER, N. Y.
Erskine-Healy, Inc.
420 St. Paul St.

SACRAMENTO, CAL.
Kimball-Upson Co.
607 Kay Street

SALT LAKE CITY, UTAH
United Elec. Supply Co.
117 W. 4th St. South

SAN ANTONIO, TEXAS
Southwest Appliance Co.
316 W. Commerce St.

SAN FRANCISCO, CAL.
Thompson & Holmes, Ltd.
171 Bluxome Street

SEATTLE, WASH.
North Coast Elec. Co.
206 Third Ave. South

SHREVEPORT, LA.
Hemenway, Inc.
509 Milam Street

SOUTH BEND, IND.
Radio Equipment Co.
213 W. Jefferson Blvd.

SPOKANE, WASH.
Brown-Johnston Co.
118 N. Lincoln St.

ST. LOUIS, MO.
Elec. Lamp & Supply Co.
1900 Washington Ave.

TAMPA, FLA.
Sou. Hdwe. & Bicycle Co.
909 Florida Ave.

TOLEDO, OHIO
Toledo Majestic Co.
135 Seventeenth St.

UTICA, N. Y.
Horrocks-Ibbotson Co.
54 Genesee Street

WASHINGTON, D. C.
Jos. M. Zamoiski Co.
928 H. Street, N. W.

WHEELING, W. VA.
Hamburg Bros.
1407 Main Street

WILKES-BARRE, PA.
Peirce-Phelps, Inc.
119 N. Main Street

WACO, TEXAS
McLendon Elec. & Radio Co.
204 S. Third St.

TYLER, TEXAS
Wadel-Connally Hdwe. Co.
Tyler, Texas

ELECTRIC REFRIGERATION NEWS

The Newspaper of the Industry — Written to be Read on Arrival

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EDITORIAL AIMS

To encourage the development of the art.
To promote ethical practices in the business.
To foster friendly relations throughout the industry.
To provide a clearing house for new methods and ideas.
To broadcast the technical, commercial, and personal news of the field.

VOL. 10, NO. 3, SERIAL NO. 235, SEPT. 20, 1933

Style 'Arrives'

LE ROI WILLIAMS, Majestic's able vice president and general manager, declares that A Century of Progress exposition in Chicago has sold some thirteen million persons on advanced styling. The American public, he declares, is more "style conscious" today than it has been in many years.

Consequently, style is the predominant feature of the new Majestic "smart set" radio—"a product which smiles out the window," as Mr. Williams puts it. And the demand for Majestic radios is now the greatest since the now-almost-mythical year of 1929.

Style was initially given serious consideration and attention by manufacturers of electric refrigerators last fall. ELECTRIC REFRIGERATION NEWS first began discussing it editorially in the summer of 1932. At that time the biggest problem was what to do about "fly-by-night" competition. The NEWS suggested that styling the cabinets might be the answer.

Outwitting the 'Fly-By-Nights'

The "fly-by-nights" had electric refrigerators which looked just like those put out by standard manufacturers, but their prices were much, much lower. It was tough competition. By giving their cabinets distinctive style, however, it was thought that the leading manufacturers might make their refrigerators stand out in a line-up of many makes, and might lend extra punch to the pride-of-possession appeal.

Styled cabinets, it was suggested, should lend themselves especially well to department store merchandising.

Style Appears in 1933 Models

Mechanical superiority, it was pointed out, is difficult to sell to a woman. Give her, on the other hand, something better that she can *see,* and it's much easier to combat the price argument. Too, style is one of the most interesting of all subjects to a woman, and one to which she readily responds.

Apparently the major manufacturers were following this line of reasoning, also, last fall; for the beginning of the 1933 season brought a wealth of new *individually styled* models. Results: (1) fly-by-night competition has practically disappeared, and the business is being divided up among a few manufacturers instead of being chiseled off by a great many; (2) the industry is enjoying the best year in its history; (3) prices are going up.

Advancing from Horse-and-Buggy Stage

That such results might have been expected from the introduction of style seems obvious when one reflects that this year marks the first advance from the horse-and-buggy stage for electric refrigerators. Just as early automobiles were simply horseless carriages propelled by a gasoline engine, so electric refrigerators, until this year, were little more than ice boxes cooled by a mechanical cake of ice.

People who had been "waiting for electric refrigeration to be perfected" looked over the new lines, decided that these refrigerators were no longer makeshifts, and made the purchase they had been postponing for years.

Two newcomers have done themselves proud this year—Grunow and Crosley. Grunow has produced more than 70,000 household refrigerators, and Crosley is said to be somewhere around the 50,000 mark. Each sells on eye-appeal rather than on ear-appeal.

While the Crosley cabinet cannot be said to be particularly stylish, it does have an extraordinary and unique feature, the Shelvador, which is an advantage which every prospect can *see* at first glance. Grunow brought out the first of the distinctively styled cabinets.

How Grunow and Crosley Did It

Not long ago a questionnaire was sent to a long list of Grunow users, asking them why they had bought that refrigerator and what they liked best about it. Biggest percentage voted for the style of the cabinet. This, in spite of the campaign featuring the refrigerant, Carrene, which had been waged by the manufacturer.

Dealers and salesmen of competitive makes who have encountered strong Grunow opposition invariably report that it is the appearance of the box which most intrigues prospects, rather than the refrigerant or any of the mechanical features. Thus many of the fears of manufacturers who have been disturbed by Grunow advertising may be quelled; instead of worrying further about discussion of refrigerants, it might be more to the point to go home and work on new cabinet designs.

Briggs Misses a 'Sure Thing' Bet

Briggs Mfg. Co. of Detroit was first to bring out styled cabinets; but not knowing how to promote them, they lost the market which might have been theirs for the taking. They had the Grunow contract this year; but now that Grunow plans manufacturing his own cabinets, Briggs is left high and dry.

And that, to many engineers, seems a pity; because Briggs designers still have a bunch of original ideas of style and construction up their sleeves which would well serve to advance the art of refrigerator making.

What about 1934? Will the trend toward styled cabinets continue? The answer seems to be: "Undoubtedly!" The editor of ELECTRIC REFRIGERATION NEWS has been privileged to look behind the scenes in the laboratories of four prominent manufacturers during the last few weeks. Each revealed there projected cabinet designs for 1934 which represent considerable advances over their 1933 lines. As Henry Ford said last winter when questioned about the new Ford V-8, "you haven't seen anything yet."

More Coming in 1934

It's always difficult, of course, to assign definite reasons for the success of any product or industry. Perhaps style had little, if anything, to do with the excellent health of the refrigeration industry this year. But a great many fingers point to the argument that it did; and most of the industry's executives are not going to overlook any bets of that nature when planning their next year's lines.

Style has apparently arrived in refrigeration. Let it be reiterated: Good performance will keep customers satisfied *after* the purchase; beautiful style will attract customers *before* the sale. It's much easier to sell a difference which can be *seen,* than one which has to be *explained.*

Lindsay Says Code and Public Opinion Will Make Advertising More Factual

By Harvey B. Lindsay, President, Dry-Zero Corp.

MAKERS of electric refrigerators have imposed upon themselves a code of fair trade practice. They have agreed to behave in gentlemanly fashion toward one another and toward their distributors, dealers and public. They have promised not to engage in commercial skullduggery, and to abstain from disparaging one another. Each has pledged himself to tell nothing but the truth about his products.

Shallow minds may suspect these avowals of honesty and fair dealing have been forced upon our refrigerator makers. Such cynical persons may assume that the code is mere window-dressing and that behind it the shenanigans of yesterday will continue unabated. Such sweetness and honesty, they may think, cannot be legislated into the habits of a highly competitive industry.

This skeptical attitude is unwarranted. I think every wise refrigerator manufacturer will welcome the change. Few of them have enjoyed being forced to do the things now outlawed by their code. Most of them long have been willing to compete on a higher plane and have failed to do so only because they feared the other fellow's tricks.

Sober Judgment Used

In adopting the refrigeration code, they have been guided by no short-lived burst of patriotic, altruistic fervor, but by the common knowledge that a saner, more sober policy is needed to meet the new selling conditions of today and tomorrow.

Since every wise leader in the industry knows that a revamping of past selling methods is essential to future success, we have little reason to expect that any of these leaders will seek to evade the spirit of the code thy have adopted.

Some of the younger, less farsighted boys may feel the urge to chisel a bit, but they will soon learn that such methods will not overwork their accounting departments in these times.

According to ELECTRIC REFRIGERATION NEWS, the most important section of the refrigeration code is that regulating advertising and sales promotion activities. The high spot in this section is the barring of both printed and verbal selling statements that may mislead the casual or uninformed reader.

Under its provision, as I understand it, literal truth is not enough. For truths can be presented in a fashion that may easily deceive the unwary reader or listener.

Code Will Bring Change

If our refrigerator makers live up to the intent of this regulation, we shall see an interesting change in selling methods. This change will be great, not because merchandising methods in the electric refrigeration industry have been worse than the other highly competitive fields, but because all merchandising in such fields has been considerably below the level set by the refrigeration code.

Such a sales policy shift, I think, will be one of the most profitable steps the industry has ever taken. This opinion is based upon no Christian ideal, but upon an accumulating mass of evidence that such a course is the most practical one to pursue.

The advertising and merchandising section of the refrigeration code implies that honest, understandable statements of fact will form the basis of every merchandising plan. This stressing of fact, as such, is the sales policy that dovetails most closely with the present mood of the consumer.

Trend in Public Reading

A yearning to know facts, facts about everything under the sun, is John Public's outstanding characteristic today. Most eloquent evidence of this is offered by the popular magazines. Eight leading monthlies noted for their fiction appeal printed more articles than fiction during the first six months of 1933.

The score, according to Advertising & Selling, was 238 special articles to 218 short stories. Madelene Coe, who has been studying this trend, says Mr. and Mrs. Public want Realism, in capital letters and large doses. They want to know facts about artichokes, divorce, politics, the stock market, acidosis, wallpaper—and refrigerators.

This craving, she thinks, indicates advertisers had best abandon drama and ballyhoo. Beautiful bathing girls may warm the heart but they will not open the purses of readers whose critical faculties have been sharpened by article reading.

This public appetite for facts makes it obvious that the refrigeration code's merchandising provisions will be observed for profit as well as partiotism. However, there are two difficulties to be overcome. One is that the public, in its present state of mind, must be convinced that honest facts *are* honest. The other is that fact advertising can succeed only when the products involved give the public a true measure of those qualities the public wants at a justified price.

The need for proving that honest facts are honest is a penalty for past exaggerations. (The salesman with a penchant for exaggerating the quality of his wares scarcely can expect to be believed when he decides to turn truthful—unless he can prove his candor is genuine.)

Electric refrigerator makers, indeed nearly all manufacturers, must pay not only for their own missteps but for similar advertising and selling practices in other fields. The public's blind faith in advertising has largely evaporated. Recent consumer surveys reveal wide dissatisfaction with the qualities of most goods purchased.

The consumers' irritation from this condition gestated slowly because years of confidence in advertised goods had dulled their critical faculties. But now active revolt has been born.

Consumers Grow Cynical

On every hand, in stores, at clubs and in homes, conversations turn to goods that have turned out badly after being purchased in good faith. Is it not natural that the consumer's faith has turned to cynicism and a sharp demand for merchandise of honest quality?

How this sharp-eyed, disillusioned public is to be sold is today's chief merchandising problem. The popular magazines furnish a clue to the answer. Scan these publications—particularly the home magazines. Note the growing number of articles telling housewives how to buy, how to gauge the true qualities of merchandise.

Typical of these is a series of articles in *Pictorial Review* entitled, "Be a B tter Buyer." The theme, as stated by the author, Jeannette Eaton, is this. "To spend wisely we must know what we are buying. Today this knowledge is assured only by scientific test. Therefore, our buying improves in direct proportion to the increase of goods which are certified or labeled as having passed the test of a laboratory in which we can have confidence, or as having met a nationally recognized specification."

This statement not only reveals what the buyer of today wants, but also exposes that buyer's skepticism. It states, in effect, that the buyer cannot trust the seller because if such trust existed there would be no demand for impartial, scientific certification of quality.

Writers Take Up the Cudgel

It says there is no need to cook up certificates of quality unless they are honest—"passed by a laboratory in which we have confidence"—pseudo or made-to-order laboratories and their certificates will not satisfy the belligerant consumer.

So far as electric refrigeration is concerned, one article plainly states: "Neither automatic refrigerators nor ice boxes are certified as to economy or efficiency in maintaining an even degree of standard coolness. Not one of us can judge the insulation hidden behind those sheathing surfaces. Only by scientific test can this important product be properly rated."

Those who study the popular magazines will recognize the type of article I have been quoting. Such material has been fed to the public for more than a year in a steady stream.

We may be assured that such articles not only influence the public, but that they are a reflection of Mr. and Mrs. Public's mind, because magazine editors give their readers only what the readers want.

What the public demands in merchandise is summed up in these two sentences from a recent article: "What we want is true relation between price and quality. What we must have is honest information."

Product Must Be Right

These things indicate not only the necessity for adhering to the advertising and merchandising provisions of the refrigeration code, but also the necessity for some fact-proving merchandising technic hitherto not used in the refrigeration field.

The second obstacle—the fact that advertising and merchandising procedure such as I have been discussing can succeed only when the products themselves are worthy—is easier to overcome. The refrigerator maker's sole job, in this case, is to built a product of such merit that its qualities can bear close scrutiny under the spotlight of honest fact advertising.

I say this is not a difficult job for two reasons. The first is that such refrigerators are being built today, and the second is that the other manufacturers can easily build products of like merit.

The combined forces of the industry's code of fair competition on the one hand and the public demand for honest information and honest merchandise on the other will, I think, lead the electric refrigeration industry into a new period of prosperity. It is certain that these forces will keep our industry healthy, which is more than can be said of the competitive sales practices of the past few years.

Philgas Promoting Electrolux Sales To Broaden Bottled Gas Market

By Elston D. Herron

DETROIT—As a means of securing new customers for its bottled gas and increasing consumption by existing bottled gas users, the Philgas Co., with headquarters here, began in June an aggressive merchandising campaign on Electrolux refrigerators which is in full swing at the present time.

These sales activities are being carried on in each of the company's 19 distribution districts, all of which are located east of the Mississippi River. Focal point of each district is a Philgas supply station, located near some large city, and serving a district within a 25-mile radius around the plant.

Officials of this Phillips Petroleum Co. subsidiary point out that the organization limits its activities in retail sales of bottled gas and appliances to thickly populated *suburban* areas unserved by gas utilities rather than to sparsely settled *rural* districts.

Dealer Organization

Except in three districts—where Philgas has its own dealer organization for appliance sales—the company cooperates with established dealers of other Philgas appliances to sell Electrolux refrigerators.

But there are four plans under which Philgas appliance outlets may sell Electrolux equipped with Philgas burners.

If a Philgas Electrolux dealer follows plan No. 1, he buys refrigerators direct from an established Electrolux outlet in his territory and resells them, or sells units for the existing outlet on a commission basis.

Signs Electrolux Agreement

Under the second plan, a Philgas dealer signs an Electrolux dealer agreement and buys his refrigerators outright from the factory at Evansville, Ind. This may be done upon recommendation of Philgas officials to Electrolux.

Third plan allows the dealer to buy refrigerators through the Philgas Co. Philgas makes arrangement with the Electrolux factory for shipments to the dealer, and handles all other details of the transaction.

When the fourth plan is used, the Philgas Co. buys the refrigerators, and the dealer resells them on a commission basis, Philgas purchasing the refrigerators on order and handling the paper.

Sales Supervisors

Located at each supply station are several sales supervisors employed by the Philgas Co. to assist Philgas appliance dealers in their merchandising operations, do sales promotional work among these retailers, etc.

When a dealer sells an Electrolux or other Philgas appliance, he also has the buyer sign a Philgas service agreement, whereby the home owner pays $36.50 for installation of necessary Philgas equipment and piping.

The user actually leases this equipment from the Philgas Co., and receives a three-year service guarantee on the apparatus, and a guarantee that for three years following, rates for Philgas will not be revised upward.

Each Philgas station has its own service men to adjust and repair Philgas equipment and pipe connections, and to service appliances using Philgas when the dealer who sold them is not able to do the work necessary.

Refuel System

Once a month, every home using Philgas is visited by a truck from the district supply station. The "refuel man" weighs the Philgas cylinder to determine how much gas has been consumed during the past 30 days, refills the container with liquid Philgas, and turns in his weight report to the district station.

All reports for each district are then sent to Philgas headquarters in Detroit, where charges for the past 30-day period are computed. The bills are then returned in bulk to the proper district office, from which they are mailed out to consumers.

Because its distribution is in concentrated areas which are widely separated, Philgas Co. has a peculiar advertising problem. Too much circulation would be lost in national advertising. Metropolitan newspaper advertising would not reach sufficient prospects, they feel.

Advertising Media

Consequently, Philgas uses billboard posters, local newspapers, and direct mail as its primary advertising media. The company's advertising officials explain that campaigns are actually tailor-made for each district, as no two present the same marketing problems.

Philgas is propane. It is in gaseous form at all atmospheric temperatures and pressures, but is compressed and delivered in liquid form. It is made from purified and condensed natural gas.

In a typical installation, the Philgas cylinder is located outside the house. Philgas is placed in the cylinder as a liquid, in which form it remains until the burner of a gas appliance within the house is turned on. Part of the liquid then vaporizes in the cylinder and passes into pipes leading to the appliance, as a gas.

This Philgas retail activity is only one of four merchandising operations carried on by the manufacturer.

It also sells Philgas in tank car quantities for industrial purposes. It supplies large quantities of the liquefied petroleum gas to central stations in small towns, from which homes in the community are supplied. And it sells Philgas at wholesale to distributors who resell it under their own brand names.

RETAIL CODE PROVISIONS CALLED 'EXPERIMENTAL'

WASHINGTON, D. C.—The price-fixing, resale agreement, and sale discount restrictions contained in the proposed master retail code are merely "experimental" and may be abandoned after a period of trial if the NRA does not like the way they work, recovery administration officials asserted here Sept. 16.

The final draft of the code to cover all retailers, which has not yet been approved by President Roosevelt, stipulates that a retailer cannot sell below cost of merchandise plus 10 per cent.

In the opinion of Gen. Hugh Johnson, administrator, the "10 per cent clause" is not unreasonable since data shows that selling costs normally are at least 18 per cent.

KANSAS CITY WILL HAVE ELECTRICAL EXPOSITION

KANSAS CITY, Mo.—An electrical show will be held here the week of Oct. 2 (Electric Refrigeration Week and National Radio Progress Week) under the sponsorship of the Electric and Radio Association of Kansas City, according to an announcement made by officials of the association.

The show will be held in the Pla-Mor Natatorium and Ice Palace and will be managed by Sam Furst, who has managed former electric shows. A committee has been named to assist Mr. Furst which is as follows: J. G. Suor, Moser & Suor, Inc., chairman; E. J. Goetze, Midwest Grunow Co.; C. F. Farley, Kansas City Power & Light Co.

GAS HEATS AND COOLS PHILADELPHIA RESIDENCE

PHILADELPHIA—Placed on exhibition here recently by the Philadelphia Gas Works is the "Home of Controlled Climate"—a 10-room residence equipped with a gas-operated unit which cools the home in summer and heats it during winter months.

All walls and the second floor ceiling of the house are insulated with 1½ in. of sheet cork, and rock wool is used around the eaves and window and door frames. Windows are made from two panes of glass separated by air spaces.

An air-conditioning unit is installed in the basement. In summer, outside air is drawn into a slowly revolving chamber and passed through a bed of Silica Gel which absorbs moisture. Tap water is used to regulate the humidity and cool the air.

The air passes through a filter, then into a fan chamber from which it is forced into circulating ducts. Gas heat drives off moisture collected in the Silica Gel every 20 minutes.

Entire heating and cooling operation is controlled thermostatically. A control on the main floor of the house may be adjusted to give circulation alone, cooling and circulation, or cooling, dehumidification, and circulation.

Temprite Names Taylor District Manager

DETROIT—Murray M. Taylor has been appointed district salesmanager of the Pacific Coast territory for Liquid Cooler Corp., according to D. H. Dolison, general sales manager.

From 1927 to 1931 Mr. Taylor was district manager for I. Fischman Soda Fountain Co. in the Michigan, Ohio, and Indiana territory. For the past two years he has been merchandising representative for National Dairy Corp.

ROGERS JOINS FIELD STAFF OF COPPUS CORP.

WORCESTER, Mass.—Frederick D. Rogers has just been appointed by the Coppus Engineering Corp. here to handle sales of the company's ventilating equipment, turbines and generators, and air filters in Maine, New Hampshire, Vermont, and eastern Massachusetts.

Dramatizing the 'Electric Light' Test

CLEVELAND—Test to compare the current consumption of a Westinghouse refrigerator with that of a 60-watt lamp was completed Aug. 31 by the Danforth Refrigeration Co., Westinghouse distributor here.

During the 30-day test, the refrigerator consumed 40½ kilowatt-hours, while the lamp used 43 kilowatt-hours, according to J. W. Dorris of the distributorship. The meters were sealed, and the initial and final readings were witnessed by a notary public.

Cost of operating the refrigerator for the entire month at three cents per kilowatt-hour, was $1.21, says Mr. Dorris. He adds:

"During the early days of the test, the temperature inside the show window was well over 80°, this causing the refrigerator to use more current than the lamp. Each succeeding week the average temperature fell, and with it the consumption of the refrigerator.

"By the middle of the month, the lamp and refrigerator were even. At the end of the third week, the lamp had used more current, and when the temperature reached an average of 68° for the last five days of the month, the refrigerator took a good lead."

Hamburg Bros. Opens Branch in Akron

PITTSBURGH — Hamburg Bros., Majestic distributor here, has opened a branch at 88 Ash St., Akron, Ohio, according to B. D. Levin, Jr., sales promotion manager of the main office.

Philip Katz will manage the new branch, which will be stocked with a complete line of Majestic radios, refrigerators, and Automatic washers.

TRILMONT SALESMEN FETED ON FAIR TRIP

CHICAGO — Executives of Norge Corp., top men of the Cramer-Krasselt Co. (Norge advertising agency), and officials of Trilling & Montague, Philadelphia Norge distributor, swelled to 300 the number of persons who arrived in Chicago the morning of Sept. 3 for three days at the Fair as guests of the Pennsylvania distributorship.

Philadelphians comprising the bulk of the party were winners in Trilling & Montague's recent summer sales contest. This party was the sixth "caravan" of quota-busting Norge dealers and salesmen to visit A Century of Progress as guests of their distributors. Other groups of Norgemen will arrive this month and next.

Knapp Greets Train

On its arrival in Chicago, the Trilmont Special—longest train ever run by the B. & O. for an individual enterprise — was greeted by John H. Knapp, Norge Corp.'s vice president in charge of sales, M. Glenn O'Hara, eastern sales manager, and other Norge executives.

A police escort conducted the visitors to two hotels where rooms had been reserved for them, and in the evening the entire delegation was entertained by Norge Corp. with a banquet at the Lake Shore Athletic Club.

Guests at Lunch, Dinner

Zenith Radio Corp. was host to the Philadelphians at a luncheon on the Fair grounds on Sept. 4, and on the night of the same day, the Automatic Burner Corp. served a dinner for the retailers at the Pabst Casino. The Norgemen left Chicago Tuesday (Sept. 5) afternoon, and arrived in Philadelphia the following day.

Enroute to and from Chicago, special entertainment was provided for the contest winners.

Just off the Press - - -

The New BEER COOLING Equipment Directory and Handbook

112 Pages—Paper Cover—35 Cents per Copy

Contents

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Russ Maintains Gas by Relating Pressure to Temperature
Modern Draft Beer Coolers Use Air Pumps or Carbonic Gas
Anheuser-Busch Brewers Tell How Beer Is Made
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Water Bath Method Used in Bishop & Babcock Beer Coolers
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Business News Publishing Co.

HOME SERVICE

By Jean M. Kerr

Gas Cooking Schools

"The Home-Maker has a new Code, too. Today she turns business woman. She buys economically and intelligently. She plans her meals efficiently. She cooks with freedom and ease. She entertains gracefully. And she has more leisure time for healthful rest and recreation."

With such flattering remarks does IRENE HICKEY, home economist of the Detroit City Gas Co., open her invitation to the homemaker wishing to become a "better manager of her home," to attend a series of 12 cooking schools being conducted at gas company headquarters this fall.

Two identical lectures weekly, one Monday evening and one Friday afternoon, are planned throughout the series. First lecture was given Sept. 18 on the subject "Canning for Better Nutrition."

"We give these lecture-demonstrations each year," explained Miss Hickey. "They are always planned to coincide with the opening of other schools, and we try to have them end before the Christmas season gets under way so as not to conflict with holiday plans."

Subjects dealt with, however, usually include holiday menus—for example, two lectures discuss "The Hallowe'en Party," and "Filling the Christmas Box." Preparation of cakes, meats, breads, and salads, takes up other lecture periods.

Invitations for the series are sent to prospects secured by salesmen, users of Electrolux refrigerators and gas ranges, mothers of girl scouts who have had training from the gas company's home service department, and business women. This year, the schools were also announced at the Michigan State Fair, where the home economics department had a booth.

Although the company handles Electrolux refrigerators, no lecture on refrigeration alone is included in the series.

"When the women notice such a lecture on the program, they will quite often say, 'Oh, I won't need that; I haven't a gas refrigerator,'" Miss Hickey stated. "We have had better results in point of prospects gained by bringing the Electrolux into each of our lectures."

* * *

Serving Users

Miss Hickey came to the Detroit City Gas Co. from the Milwaukee Gas Light Co. four years ago. Since that time she has built her department up to include five workers besides herself.

Headquarters of the home service department—which includes an auditorium, office, lounge, a demonstration and a laboratory kitchen—take up most of the seventh floor of the utility building. Of especial interest in the modern green and gray kitchens are the new flat-top, automatic lighting, temperature- and time-controlled Citigas range, and the table-top Electrolux.

In speaking of the array of utensils lining the shelves, Miss Hickey explained that the department has a list of the most necessary kitchen implements which it furnishes on request to brides. This includes the best equipment available, although no brands are mentioned.

"Good equipment is necessary to a well-run kitchen," she said. "Once an engineer watched me whipping cream with a modern ball-bearing beater.

"'That looks like a pretty good beater,' he said.

"'It is,' I replied.

"'Guess I'll get one of those,' he went on. 'My wife wanted me to whip some cream for her the other night with a little two-for-a-cent beater that wouldn't do the work. If I'm going to take on that job I'd better have the right tools.'"

Two members of Miss Hickey's department do valuable work in the field. They are women of about 30 who have been trained not only in the home service schools but in the gas company's service department. Armed with a thorough knowledge of what makes gas appliances work, these women are sent out to visit users to explain methods of getting the best results from their appliances. No direct selling is handled by these service women, but the company feels that many sales can be traced to their willingness to help users with problems.

* * *

Things Your Wife May Not Know

Over the chocolate ice cream jelly roll and coffee which concluded a delicious Kelvin Kitchen luncheon last week, INEZ S. WILLSON, director of the National Live Stock and Meat Board department of home economics, told us something about her work.

"The home economics operation of the board," she explained, "is supported by voluntary contributions from livestock producers and meat packers. For every car they ship, a certain amount of the proceeds goes to the support of our department. An increase in this amount this year made possible our homemakers' service department, which is handling the 75 newspaper cooking schools we are initiating throughout the East and Middle West next week."

Miss Willson herself does most of the writing and planning of educational material sent out by her department to newspapers, radio stations, and home economics groups.

Some of her pen-fruits of recent months (they are literally penned, as she composes in such fine longhand that her work goes directly to the linotype without being typewritten) have been a cook book which is to be distributed at the schools, and sold at cost to retailers for holiday promotion material; a clip sheet containing menus, hints on meat preparation and storage, etc., which goes to all newspapers every month; a textbook for teachers; a bi-monthly 4-page sheet known as "Food Nutrition News," sent to school teachers, containing a review of late scientific research on meat and nutrition; a radio news sheet sent regularly to 540 radio stations throughout the country.

"We checked up once this year to find out how many of the stations were using our broadcast material," Miss Willson commented on this last feature. "Cards requesting information were sent to all the radio stations, and we are glad to say that 100 replies were received stating that the talks were being used."

The average housewife has still much to learn about the preparation of meat for the table, according to Miss Willson. Under the head of things most women probably never knew till now she listed these:

Veal is the only meat which should be covered in roasting.

As searing a steak does not keep in the juices, it is not necessary to turn a steak more than once during the cooking process.

It is not necessary to add water to a roast.

Pork chops should be started cooking in an open pan, then covered to finish the cooking process. Steam formed inside the covered pan gives necessary moisture.

Basting is old-fashioned and unnecessary; if the fatty part of the roast is on top, enough moisture will seep through.

"I sometimes think the old-time recipes were written by men," said Miss Willson. "Basting requires constant attention of the housewife to the stove, and men, believing woman's place is in the home, thought basting meats was a good way to keep her there."

HOME ECONOMISTS PLAN A.G.A. BREAKFAST MEETING

CHICAGO—Breakfast at the Stevens hotel on Wednesday morning, Sept. 27, followed by a series of two-minute talks by home economists, will provide home service women attending the American Gas Association convention here with entertainment and up-to-the-minute information in their field.

Subjects to be dealt with include brief addresses on individual cookery classes, advertising home service, dealer contacts, cooking classes for salesmen, traveling kitchens, theater schools, and kitchen modernization.

Ruth Kleinmaier, of Central Hudson Gas & Electric Corp., Poughkeepsie, N. Y., who is chairman of the A.G.A. home service committee, is in charge of the arrangements.

Also of interest to visiting home economists will be the A.G.A. commercial section meeting on Tuesday afternoon, Sept. 26. A play in six scenes, "Modernizing the Kitchen," is to be the central theme of the meeting, which also will include discussions on kitchen modernization by sales managers and home service directors from gas utilities where programs are being introduced.

9 Salesmen Sell Quota In Electrolux Contest

WASHINGTON, D. C.—Salesmen of the Washington Gas Light Co. are sporting the latest styles in fashionable wearing apparel as the result of an Electrolux refrigerator contest.

Each of the utility's 14 appliance salesmen was given a quota of 30 sales for the 60-day campaign. Every sale entitled a man to a certain article of clothing, with the thirtieth sale completing the fall wardrobe.

At the end of the contest, nine salesmen had made more than 30 sales each, and the remaining five had sold more than 20 refrigerators each, according to H. M. Brundage, Jr., general sales manager. Total sales made during the contest were 468.

MIAMI COMPANY WILL SELL GAS APPLIANCES

MIAMI, Fla.—Organized to merchandise various makes of gas appliances in this city is Gas Appliances, Inc., which has opened a 5,000 sq. ft. display and sales room in the Franklin building. The company has been franchised as an Electrolux dealer.

G-E's Clara Dean Completes Long Field Trip

CLEVELAND—After six months in the field contacting sales organizations throughout the East and Middle West, Clara Dean of the General Electric Kitchen Institute staff has returned to home service headquarters here.

Miss Dean traversed all of the New England states during her trip, as well as New York, New Jersey, Tennessee, Michigan, Alabama, the Carolinas, and Virginia.

In Washington, D. C., she contacted home service representatives of the Potomac Electric Power Co., in addition to holding prospect demonstrations and salesmen training courses. Later, at Springfield, Mass., she gave demonstrations in connection with a three-day department store opening.

At a Food and Home Progress exposition in Portland, Me., she presented the General Electric Health Kitchen, and also broadcast over the NBC red network. In Boston she conducted a special meeting of home service women.

Swinging over to Buffalo she held prospect demonstrations and sales meetings at the Hertel Ave. store of Niagara Hudson Power Corp.

Two newspaper cooking schools, one in Chattanooga, Tenn., and one in connection with the *Gadsden Times*, Gadsden, Ala., varied her routine. Cooking schools were also held in the towns in northern Michigan.

In New York City most of her work was demonstrating G-E appliances in department stores; while in Birmingham, Ala., she worked on the refrigerator campaign of Alabama Power Co.

Norge Issues Booklet On Laundering

DETROIT—A sales promotion piece in the form of a 33-page manual containing a wealth of detailed information about every step in the laundering process has recently been released by Norge Corp., manufacturer of "Economaid" washing machines.

The following subjects are discussed in the manual: Sorting of the wash into loads; removal of stains; soaking the wash; choosing the soap; washing white cottons and linens; importance of rinsing; bluing and starching; drying; sprinkling and ironing; washing colored clothes; washing woolens; washing blankets; ten rules for laundering silks; seven rules for laundering rayons; washing laces and delicate fabrics; white curtains; gloves; pillows; diapers; and infected clothing.

BRONX HOUSEWIVES INSPECT 'KITCHEN ON WHEELS'

NEW YORK CITY — One thousand Bronx housewives visited a "kitchen on wheels" equipped with gas appliances when the Consolidated Gas Co. of New York, cooperating with neighboring dealers and gas offices, sponsored the coach's tour of the Bronx residential district for a week recently. Featured in the kitchen's equipment were two air-cooled Electrolux refrigerators.

All appliances were supplied with gas from tanks stored on the truck. The kitchen was 25 ft. long and 8 ft. wide. Two home economists demonstrated the gas appliances during the kitchen's "run" in the Bronx.

INEZ WILLSON VISITS KELVINATOR KITCHEN

DETROIT—To make final plans for cooking schools to run from Sept. 18 through Dec. 8 this year, in which Kelvinator Corp. will cooperate, Inez S. Willson, director of the National Live Stock and Meat Board department of home economics in Chicago, and two members of her staff visited Kelvin Kitchen here last week.

The cooking schools are being held as a function of the homemakers' service department, a division of the home economics operation of the Board. Kelvinator electric refrigerators will be used in the demonstrations.

Plans to date provide for two schools operating at a time in cities throughout the East and Middle West, operated by two crews of lecturers. First of the schools opened in Wyandotte, Mich., this week under the supervision of Ann Kingsley.

Ruth Chambers and Miss Kingsley accompanied Miss Willson to Detroit, where they were entertained by members of the Kelvin Kitchen staff at luncheon Sept. 12, preceded by a trip through the Kelvinator Detroit plant.

Tentative schedule of the cooking schools is as follows:

Sept. 18-22—Wyandotte, Mich., *Daily Record*, Miss Kingsley.

Sept. 25-28—Waterbury, Conn., *Republican-American*, Miss Kingsley; and Muncie, Ind., *Press*, Miss Chambers.

Oct. 2-4—New Haven, Conn., *Register*, Miss Chambers; and Toledo *News-Bee*, Miss Kingsley. Oct. 10-13—Racine, Wis., *Journal-Times*, Miss Chambers; and Canton, Ohio, *Repository*, Miss Kingsley.

Oct. 17-20—Evansville, Ind., *Press*, Miss Chambers; and Columbus, Ohio, *Citizen*, Miss Kingsley. Oct. 23-27—Boston *Post*, Miss Chambers; and Fort Wayne, Ind., *Journal-Gazette*, Miss Kingsley.

Oct. 30-Nov. 3—Washington, D. C., *Post*, Miss Kingsley; and Waukegan, Ill., *News-Sun*, Miss Chambers. Nov. 6-9—New Bedford, Mass., *Standard-Times* and *Morning Mercury*, Miss Kingley; and Charlotte, N. C., *News*, Miss Chambers. Nov. 14-17, Bridgeport, Conn., *Post-Telegram*, Miss Kingsley; Omaha, Nebr., *World-Herald*, Miss Chambers; and Danville, Ill., *Commercial-News*, Nora Altic, assistant to Miss Kingsley.

Nov. 21-24, Indianapolis *Times*, Miss Kingsley; and Portsmouth, Ohio *Times*, Miss Chambers. Dec. 5-8, Portland, Me., *Evening Express*, Miss Kingsley; Youngstown, Ohio, *Vindicator*, Miss Chambers; and Eau Claire, Wis., *Leader Telegram*, Miss Altic.

Cabbage Fresh After 5 Months in Electrolux

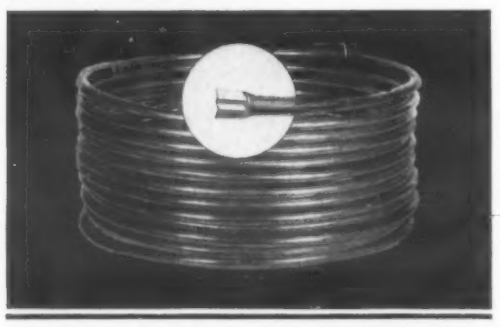
DETROIT—A celery cabbage, stored in an Electrolux refrigerator from Sept. 23, 1932 until March 6, 1933, was found to be in perfect condition at the end of that time, according to Thomas Barkley, owner of the Electrolux.

"The cabbage was placed in the refrigerator and forgotten about for a few weeks," said Mr. Barkley. "When we did discover it, we decided to see how long it would keep fresh. It was taken out March 6 of this year and eaten by the three members of my family."

Detroit City Gas Co. sold Mr. Barkley his Electrolux, a 7-cu. ft. model, tnree years ago.

Brightest in . . .
APPEARANCE

NRA MEMBER U.S. WE DO OUR PART



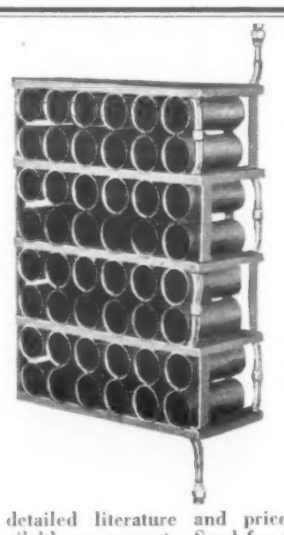
The free flow of liquids—and freedom from defects in tubing—can be told largely by the brightness and clearness of the surface. The brighter the surface — the greater the efficiency — first and last. So, Wolverine refrigeration seamless tubing is bright annealed to the highest degree of perfection in furnaces controlled by batteries of accurate electrical automatics.

IMMEDIATE DELIVERIES

25, 50 and 100 ft. coils, plain or tin plated, dehydrated and sealed or open end. Longer lengths to order. WOLVERINE TUBE CO., 1491 Central Ave., Detroit, Michigan. Sales Offices in 29 cities. Export Dept, H. M. Robins Co., 120 Madison Ave., Detroit

WOLVERINE
Seamless Copper Tubing
For Refrigeration

LARKIN BOTTLED BEER COIL



A New Sales Aid

THE new LARKIN Bottled Beer Coil cools the bottles to any desired temperature. Made in units holding one case of twenty-four bottles or multiples. A bell top on the sleeves keeps labels from being torn.

New detailed literature and prices are available on request. Send for it at once and get those added sales made possible with this new Coil.

LARKIN
Refrigerating Corporation
Originator and Manufacturers
ATLANTA, GA., U.S.A.

NRA MEMBER U.S. WE DO OUR PART

100% VERTICAL SURFACE

U.S. PATENT No. 1,776,238.

LARKIN COILS

COMPANION MERCHANDISE

'ALL-GAS' KITCHEN IS DESIGNED BY UTILITY

BROOKLYN — Designed to increase sales of gas appliances, the Brooklyn Union Gas Co. here is introducing the "kitchen compact," an assembly of four gas appliances with cabinets and accessories to be sold as a single unit.

Major appliances comprising the compact are an Electrolux refrigerator, Dictator automatic water heater, gas range, and Ideal gas-fired boiler large enough to supply hot-water heat to a seven room house or apartment.

As used in the assembly, the Electrolux is installed without legs. A louvred panel and top are available for use on the refrigerator when unusual operating conditions are encountered. Natural draft for the unit is provided by a flue duct extending along the exterior height of the cabinet.

Water heater and house-heating boiler are supplied by the American Gas Products Corp. Range is specially designed for the compact by the same company and manufactured by the Dahlstrom Metallic Door Co., according to J. M. Connolly of the Brooklyn utility.

The sink, made by Standard Sanitary & Mfg. Co., has two basins permitting the housewife to wash dishes in one compartment, and rinse and dry them in the other.

All cabinets for the assembly are being manufactured by the Dahlstrom company, and are finished in vinylite, a Carbide & Carbon product which resists acids and does not chip and crack, says Mr. Connolly.

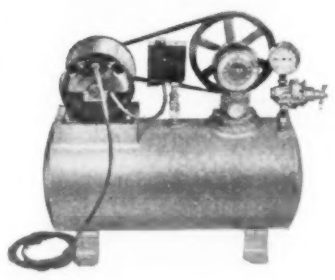
Base of the assembly is solid on the floor, but is recessed to give toe room. Top is flush with the ceiling. A single flue connection serves all four gas appliances.

Survey Shows Number Appliances in Use

CROTON, N.Y.—Of the 1,130 consumers of electricity in this town, 233 have electric refrigerators, a survey just completed by village authorities discloses.

Radios lead all other major appliances, 799 sets being installed. Other appliances installed are: 438 vacuum cleaners, 133 percolators, three ranges and one electric dishwasher.

SCHAEFER'S OILLESS BEER PUMP



A radical departure from the conventional air compressor.

This pump was designed for beer pressure work and will give years of satisfactory automatic service.

A ready market awaits the live distributor. Write for prices and discounts.

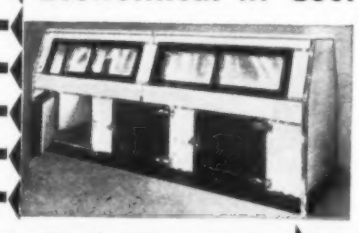
Manufactured by

HAROLD L. SCHAEFER, INC.

1620 Harmon Place

Minneapolis, Minnesota

Economical in Cost



Ace Hard Rubber Equipment for Refrigerated Display Cabinets

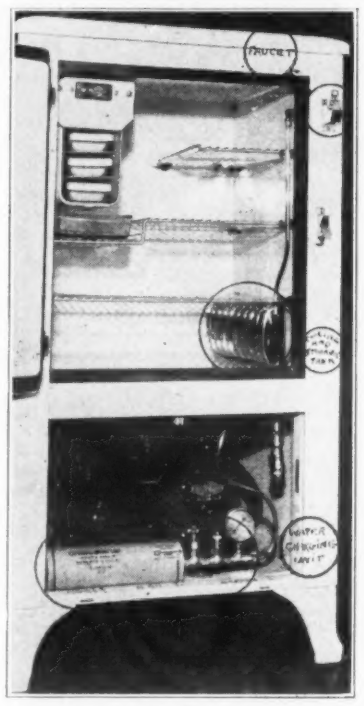
Doors—Door Frames—Slide Rails
Jambs—Glazing Strips—Trim.
Many standard and special sizes.
Send for catalogue and prices.

American Hard Rubber Company

11 Mercer Street, New York, N. Y.

Akron, Ohio—111 W. Washington St., Chicago, Ill.

Carbonator-Cooler



Charging tank is in compressor section and chilling tank in cooling compartment.

* * *

SYRACUSE MEN DEVELOP DOMESTIC WATER COOLER

SYRACUSE, N. Y.—Roberts & Ehle Co. here have developed a water-cooling system for household electric refrigerators which does not require opening of the refrigerator door to draw a glass of cold water, according to Paul W. Ehle.

The "Chargolator" as it is called because an auxiliary tank can be used to carbonate water, includes a small direct expansion water-cooling and storage tank which is installed inside the food compartment on the bottom shelf.

The faucet is installed on the outside of the cabinet, above the door latch. Copper tubing connections are made between the condensing unit and cooling tank, and up to the faucet. When the carbonated water feature is employed, the carbonating tank is installed in the compressor compartment.

CABINET DESIGN STRESSED IN NEW LYRIC RADIO LINE

NORTH TONAWANDA, N. Y. — Twenty-one models are included in the 1934 line of Lyric radios recently introduced by the Rudolph Wurlitzer Mfg. Co. of this city.

Particular stress has been laid on advanced cabinet design, according to Homer E. Capehart, director of sales. Russell Wright, well-known designer, was commissioned to design the new Lyric line.

The Lyric models range in size from a small "student's size" compact to consoles. The line also includes portable a.c.-d.c. sets; an automobile radio; two period design furniture models; short wave combinations and a remote speaker combination.

MINNEAPOLIS-HONEYWELL PRIZES GO TO TIMKEN

MINNEAPOLIS—Salesmen for Timken Silent Automatic oil burners won the first three places in the contest sponsored by the Minneapolis-Honeywell Regulator Co. for oil burner salesmen who sent in letters giving the best selling points for their electric clock thermostats.

H. C. McGregor of Albany won first prize of $50. Second prize of $30 was awarded to T. R. Allen of Chicago and third prize went to E. R. Lott of St. Paul, Minn.

MARSHALL RETURNS FROM EUROPEAN SURVEY

DETROIT — R. B. Marshall, vice president and general manager of Electromaster, Inc., recently returned to this country after a sojourn of several months in Holland and England where he made a survey-study of the electric range rental system which has been practiced in these countries for the past two decades.

According to Mr. Marshall, the rental plan has been responsible for the rapid growth and acceptance of electric cookery in England and Holland.

EUREKA SALES FORCE WILL HELP DEALERS

DETROIT—An expansion program calling for the employment of between 2,000 and 4,000 retail salesmen between now and Jan. 1 has been announced by Fred Wardell, president, Eureka Vacuum Cleaner Co.

The salesmen will be added in major markets, where Eureka this fall will make its greatest drive for business in more than two years.

Chief aim of the expansion program is to help dealers who can not afford at this time to place salesmen in the field, Mr. Wardell explained. He said that the majority of the factory operated sales groups will be re-sale organizations, which will make all sales through dealers, department stores, and utilities.

Appointment of John B. Tubergen as director of personnel to handle the big field organization that is planned also was announced by Mr. Wardell. A. L. McCarthy, vice president in charge of sales, will direct the program.

Majestic Prints Manual On Auto Radio

CHICAGO—The Majestic auto radio installation manual has recently been made available by the service department of the Grigsby-Grunow Co.

The manual offers technical information pertaining to the receiver, source of motor interference, and correct manner and position of installing the receiver. Detailed information of importance relative to 56 different makes of cars is also contained in the new radio manual.

Suggestions about certain tools required are included, together with a complete list of auto radio parts.

Ice Cream Maker is Designed for Use In Refrigerator

LOUISVILLE, Ky.—The "Monitor" automatic ice cream mixer and freezer for operation in the home in conjunction with an electric refrigerator has been introduced by the Louisville Electric Mfg. Co. of this city.

The "Monitor," which eliminates all hand mixing and churning, comes in a three-piece assembly which includes the freezer tray (which fits into the evaporator), the motor, and the dasher.

First step in the process of making ice cream with this equipment is to set the temperature control of the refrigerator to the coldest point several minutes before the freezer tray is inserted, and leaves it there during the freezing process.

The dasher is fitted into the tray by inserting a slotted rod into the end of the dasher. The ingredients are then placed in the freezer tray. Next step is to connect the motor with the tray, and to turn it on for a few minutes to insure complete mixing.

The tray is placed in the freezing chamber of the refrigerator, with the switch cord coming out over the top of the door and hanging in front of the refrigerator door. If the freezing chamber is well frosted, the tray will melt out a perfect bed and will freeze in place.

The motor is turned on by means of a signal switch which hangs on the cord outside the refrigerator door. An automatic cut-out switch cuts off the motor when the freezing is almost completed. A light in the signal switch then indicates that the mixture is frozen to the proper consistency.

The dasher is then removed and the tray placed back in the freezing chamber until the desired consistency has been attained.

'CURB SERVICE' NETS 102 SALES IN DAY

PHILADELPHIA—A "Curb Service" system of contacting prospects was the feature of a one-day drive by the General Utilities Corp. here which netted 102 Williams Oil-O-Matic oil burners sales in the 24-hour period.

The drive was made during a summer sales campaign staged in competition with the Boston Oil-O-Matic organization. On the evening before the close of the campaign the Philadelphians were trailing by about 60 sales. In the final rally one of the salesmen conceived of the "Curb Service" idea as the only possible way through which the salesmen could contact their prospects in the one remaining day.

Final Telephone Canvass

The next morning the salesmen bore down on the telephones and contacted their prospects with the following approach:

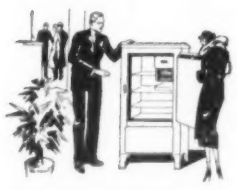
"Mrs. Blank, this is John Smith, salesman for General Utilities. For days I have been telling you about our special offer. Today is the final day and after midnight tonight the oil burner for your home will cost more money.

Sales Closed at Curb

"I'm swamped, Mrs. Blank, I cannot possibly visit your home today. Our showroom is crowded and every available man is busy. But if you will drive down I shall gladly make an appointment at the hour most convenient for you and explain the saving you will enjoy if you *buy now.*"

Through the day and night prospects drew up in front of the showroom of the General Utilities Corp. Most of the installation contracts were signed at the curb. By midnight 102 sales had been consummated and not a salesman had left the showroom.

Buyers want to know the Quality Features



Tell them about

RUST PREVENTION

IN buying a refrigerator, there are a few big features that stick in the customer's mind.

Continued fine appearance is one of them. A rust-proofed cabinet that will hold its enamel or lacquer finish is a sure-fire sales point.

No matter how efficient the mechanical unit, no matter how many ice cubes it produces, no matter how sweet and wholesome food is maintained, no woman will forgive the dealer or manufacturer who sells her a cabinet that soon becomes rusty and shabby.

Protection by Parker Processes is a recognized quality feature widely appreciated by the buying public. Make use of this sales asset in your selling.

PARKER RUST-PROOF COMPANY

2197 EAST MILWAUKEE AVENUE

DETROIT • MICHIGAN

Parker literature summarizes the findings of the Parker research staff. It describes their more important findings in 17 years of research, supported by extensive practical experience in rust-proofing and finish improvement of iron and steel products in all industries. Copies will be sent on request to interested technical men and manufacturers.

PARKER RUST-PROOFING processes

PARKERIZING • BONDERIZING

Employer Not Forced To Sign Code But Can Be Punished For Violation

WASHINGTON, D. C.—The government has no legal remedy against an individual employer who refuses to sign or assent to a code of fair competition approved for his industry, unless and until he engages in a practice which constitutes a violation of the code, according to an article printed in *The United States Law Week*, a national bulletin of current law published here.

There is no provision in the National Industrial Recovery Act for the recovery of penalties in civil suits by the government, nor for an action, either for damages or for injunction, by an adherent to the code against a violator, the article points out.

Three Types of Penalties

Where an employer does violate the code, he is subject to all penalties prescribed by the statute for code violators, whether or not he has formally signed or assented to the code.

There are three type of legal action which can be taken, under the provisions of the National Industrial Recovery Act, against a code violator:

First, the Federal Trade Commission may issue an order against the violator to cease and desist from the violation complained of. Section 3 (b) provides: "Any violation of such standards (standards of fair competition; i. e., the code, for an industry) in any transaction in or affecting interstate or foreign commerce shall be deemed an unfair method of competition in commerce withing the meaning of the Federal Trade Commission Act."

Injunction Suit

Second, an injunction suit may be instituted to restrain the alleged violation. Section 3 (c) provides: "It shall be the duty of the several district attorneys of the United States, in their respective districts, under the direction of the Attorney General, to institute proceedings in equity to prevent and restrain such violations." The district courts of the United States have been invested with jurisdiction of such suits.

Third, an alleged violator of a code may be criminally prosecuted. Section 3 (f) provides: When a code of fair competition has been approved or prescribed by the President under this title, any violation of any provision thereof in any transaction in or affecting interstate or foreign commerce shall be a misdemeanor, and upon conviction thereof an offender shall be fined not more than $500 for each offense, and each day such violation continues shall be deemed a separate offense."

"An employer cannot be compelled by legal action to sign a code of fair competition promulgated under the NIRA," says *The United States Law Week*. "It is true, however, that unless an employer signs a certificate of compliance with the code, if a code for his industry has been promulgated, or signs the President's Reemployment Agreement for a modified agreement, he may not fly the Blue Eagle, a device invented to aid in the mobilization of public opinion. Denial of the use of the Blue Eagle is, of course, a most effective extra-legal weapon.

"The government has no authority, apparently, to prescribe a separate code to govern an individual employer. The section of the statute which authorizes the President to prescribe codes is expressly applicable to codes for "a trade or industry or subdivision thereof" and likely does not contemplate a separate code for an individual employer.

The Administrator has stated that in the case of Henry Ford the government does not intend to prescribe or accept a separate code.

No Limited Code Power

"Nor is there apparently any authority to prescribe a limited code for an individual employer. The power to prescribe limited codes exists only where no mutual agreement as to hours of labor, minimum rates of pay and other conditions of employment has been entered into between the 'employers and employes in any trade or industry or subdivision thereof'."

"If the provision could be construed to empower the President to prescribe a limited code for a particular employer, the power could not be exercised unless the President finds, after an investigation and a public hearing as to labor practices, policies, wages, hours of labor and conditions of employment, that the limited code is 'necessary to effectuate the policy of the statute'."

Licensing Provision

The law bulletin states that the authority of the President to license an individual employer, without at the same time licensing a whole industry or subdivision of an industry, is conjectural.

Then too, says the article, the President may not exercise the licensing provision of the statute without two findings, one that "destructive wage or price cutting or other activities contrary to the policy of this title are being practiced in any trade or industry or any subdivision thereof" and the other that "it is essential to license business enterprises in order to make effective a code of fair competition."

Applicable to Entire Industry

The article makes clear the fact that the promulgation of a code for an individual employer who refuses to sign the code for his industry, or the licensing of a particular employer is an unnecessary procedure to compel the employer's compliance with a code of fair competition.

The approved code governing an industry is applicable to each and every employer within that industry. It governs the business conduct of the individual employer, even though he has not agreed to it.

Section 3 (b) of NIRA states that the provisions of an approved code "shall be the standards of fair competition for such trade or industry." The statute does not limit the application of a code to the parties thereto. Its language is sufficiently broad to apply to individual employers who refuse to come under the code approved for the industry of which they are a part.

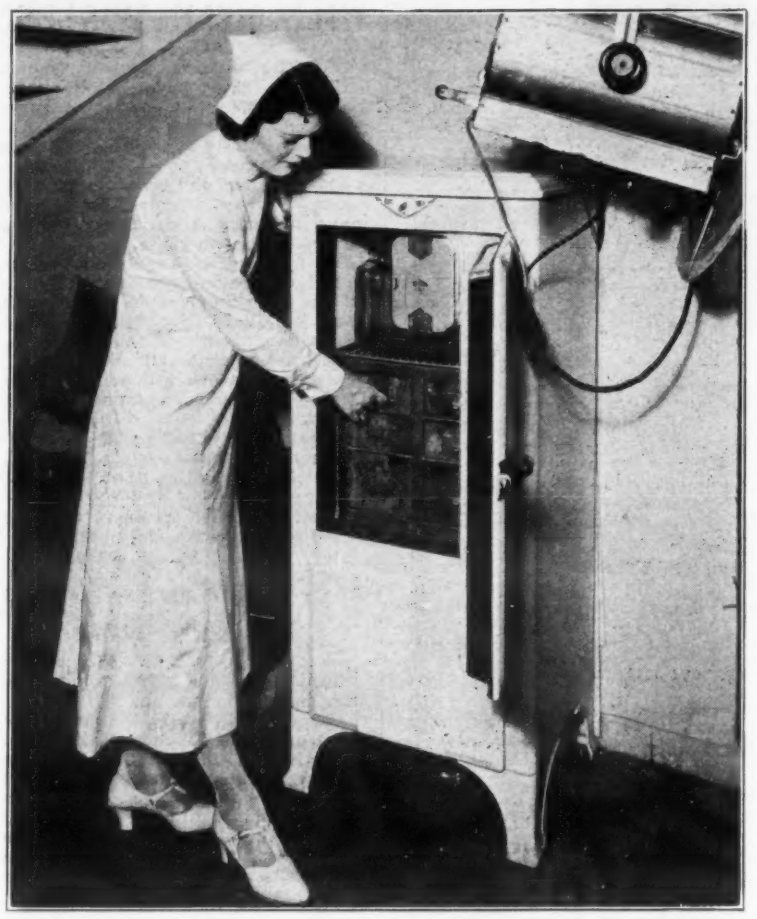
As to Mr. Ford's case, Administrator Johnson has made it plain that the automobile code, now in effect, "covers him as well as everybody else."

An approved code for a trade or industry has the force and effect of a law, applicable to all employers within such trade or industry.

An agreement to abide by its provisions *is not a condition precedent* to the subjection of an employer to the penalties provided by the statute for violation of a code, the bulletin opines.

If any employer within an industry violates the approved code for his industry, he is, in the words of Gen. Johnson, "violating the law of the United States." He is then subject to the penalties cited above.

Where Protection Is a Necessity



Marjorie Teterhoff, nurse in the dental section of the Hall of Science, inspects some instruments and drugs in the division's Frigidaire

NRA SEEN AS CREATOR OF SMALLTOWN MARKET

DETROIT—Movement for national industrial recovery is doing much to create a new market for electric refrigerators in small towns, and all sales organizations concerned with distribution in such communities should be placing increased effort on merchandising operations there.

So states H. W. Burritt, Kelvinator Corp.'s vice president in charge of sales, in a communication to all branches of the company's distribution organizations.

Discussing NRA codes of various industries, Mr. Burritt says: "In many of the submitted codes there is no difference in the minimum wage scale set up for large cities and small towns. In no code is the deduction for lower expenses in the small town very marked.

"This can mean but one thing: the small town worker is undoubtedly going to have a larger spendable surplus in comparison with the large city employe, than he has had in the past."

He continues, "In such towns a new market for electric refrigeration is immediately created. New families with new houses and more money to spend automatically present an additional group of prospects.

"It is unlikely that any small town has had such a high percentage of unemployment as the average large city. And so the NRA code will in almost every case completely wipe out small town unemployment."

Ferro Enamel to Have Building Division

CLEVELAND—Ferro Enamel Corp. of this city has announced the addition of a "building" department to their organization. R. T. Hendrich has been placed in charge of the department and will contact architects, engineers, contractors, and builders on the use of porcelain enamel exteriors.
which manufacturers porcelain enamel

Last year the Ferro Enamel Corp., which manufactures porcelain enamel products for refrigerators, built the first porcelain enameled house to be erected in this city. The company cosponsors the frameless steel porcelain enameled house, known as the Armco-Ferro house, at A Century of Progress.

LEONARD SALESMEN GET TRIP TO FAIR AS PRIZE

SYRACUSE, N. Y.—Nine Leonard electric refrigerator salesmen from this territory have just returned from a lake cruise on the *S. S. Seeandbee* to A Century of Progress. The trip to the World's Fair with all expenses paid, was their award for qualifying in a Leonard refrigerator sales contest sponsored by the Warner Distributing Corp., Leonard distributor in this area.

The trip-winners qualified by selling an established quota of Leonard refrigerators during the period from May 19 to Aug. 25, according to L. J. Warner, president of the company.

Those who made the Chicago trip included J. S. Taylor, F. R. O'Hara, M. H. Silver and Joseph Cariseo of Syracuse, and S. W. Conrad, Clay, N. Y., all associated with Alex Grant's Sons, Syracuse, N. Y. Leonard dealer; P. W. Smith and R. Matteson of the organization of Kolb, Dickerson & Smith, Binghamton, N. Y.; Leon Waccard, with the Ohio Maytag Co., Syracuse, and David Lerman with the Louis Lerman Co., Inc., Oneida, N. Y.

ELECTROLUX FINISH GETS GREASE TEST

EVANSVILLE, Ind.—Lacquers used on cabinets of the Electrolux refrigerator are subjected to a kitchen grease resistance test requiring a total of 80,000 strokes across the finish of a panel, Electrolux engineers report.

In determining grease resistance, the panels are placed on a rubbing machine so constructed that felt pads, saturated in greases, pass over the panels. After 80,000 strokes have been made, there must be no signs of softenings, rotting, or wearing away.

Test Moisture Resistance

Another test is made to indicate the finish's moisture resistance. Electrolux paint engineers put panels in a water bath for 400 hours, the water being maintained at temperature of 100° F.

Tests for brittleness and chipping are made by placing the panels in an aging cabinet at a constant temperature of 140° F. for seven days.

After the second day, the panels are removed daily and cooled to room temperature. They are then placed on an impact machine and hammered on both sides.

Exposure to Arclight

This testing device is so designed that a ball-tipped hammer weighing 3½ lbs. is dropped from a height of 20 in. to dent the panel. The film must then stretch across the dent without cracking or chipping to pass the test.

To test for discoloration, panels are subjected for 60 hours to a powerful carbon arclight similar to those used for determining fastness to light in the paint and textile industry.

These tests are regarded as equivalent to six months in field service.

Service Men's Report Is Aid to Salesmen

FORT WORTH, Tex.—A tie-up between the service and sales departments has been effected by the Lone Star Gas Co. here to increase sales of Electrolux refrigerators, according to E. C. Whitcomb, business manager.

At the end of each day, all service men report on the kind and condition of refrigerators found in homes visited for service work. These reports are given to the company's salesmen as a source of prospect leads.

Joint meetings of salesmen and service men are held regularly for instruction in proper presentation of Electrolux features, and discussion of problems arising from the cooperative plan.

DALLAS GAS CO. SALESMEN SELL CARLOAD IN 4 DAYS

DALLAS, Tex.—Salesmen of the Dallas Gas. Co. here recently sold and delivered an entire carload of Electrolux refrigerators between Monday and Thursday of one week, according to K. C. Patton, director of sales. All of the units were sold at retail.

MODERN CABINET DESIGN

Demands Massive, Deep Drawn Steel Stampings

Give yourself complete freedom in designing refrigerator cabinets with massive, deep drawn stampings that add beauty and new features to meet modern trends. Our enormous equipment produces large, uniform, completely press-formed shapes of accurate dimensions at low cost. We specialize on tops, doors, side panels, door liners, etc. — ready for assembly with other parts fabricated in your plant. Now serving several leading manufacturers.

Mail Blue Prints for Quotations

TRUSCON STEEL COMPANY
PRESSED STEEL DIVISION 6100 Truscon Ave., CLEVELAND, OHIO
MAIN OFFICE: YOUNGSTOWN, OHIO
Sales and Engineering Offices in all Principal Cities

TRUSCON

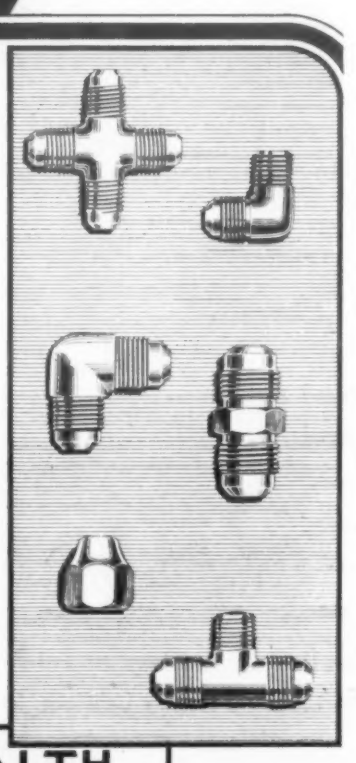
SEEPAGE PROOF

PIPE AND TUBE FITTINGS

A small item, these seepage proof fittings for automatic refrigeration, but upon them depends much of the satisfactory operation of the unit.

That is why Commonwealth Brass Seepage-Proof Fittings have been preferred by the leaders of the automatic refrigeration industry for 20 years . . . they do the job for which they are made; they prevent the leakage of refrigerants.

Commonwealth Fittings are made from hot forged brass or extruded rod . . . every thread is cut to close limits . . . each tube seat is protected in shipping . . . and each piece is 100 per cent inspected . . . each fitting is "Built Right—To Stay Tight."



BUILT RIGHT TO STAY TIGHT

COMMONWEALTH BRASS CORPORATION
COMMONWEALTH AVE. AND G.T.R.R.
DETROIT

ENGINEERING

Rosenbusch Describes Beer Handling; Seitz Tells About Beer Cooling

(*Concluded from Page 1, Column 5*)

(proof is 50 per cent alcohol and 50 per cent water by volume).

"Hence Canadian 8 per cent beer would be 4 per cent beer by volume and 3.2 by weight in America."

If beer were biologically pure, he averred, it could be kept at room temperature. But because of aerial infection, impurities in containers and vessels, and the omniprescence of lactic acids (which grow most readily above 60° F.), the temperature of beer should never be allowed to rise above 42° F. after leaving the brewery.

For storing beer at dispensing places, he declared, the proper temperature is as close to freezing as possible. Beer will freeze, if motionless, at 29° F. Freezing, however, won't necessarily spoil beer. In any case, beer should be kept below 40° F. at all times.

Best serving temperatures range from 40° to 45°, the speaker opined.

"Most beer drinkers," he said, "paralyze their taste by drinking it too cold. They don't know whether they are drinking beer or water."

Refrigeration Equipment Being Improved

Cooling operations in old-time breweries were indeed wasteful, according to Mr. Rosenbusch. Today's intense competition, however, is forcing brewers to pay attention to proper heat balance and to scrap obsolete equipment. Refrigeration salesmen should find brewers in a most receptive mood to stories of more economical production by means of new equipment, he believes.

Steel barrels are being widely used today, according to the speaker, because of the scarcity of good cooperage. A good supply of properly constructed wooden barrels may not be available until late next fall.

One definite advantage possessed by steel barrels over the wooden variety is that they always have the same capacity; whereas wooden barrels are apt to shrink smaller and smaller. Disadvantages of present steel packages are difficulty of sanitation, and improper insulation.

During transportation wooden barrels may keep beer at temperatures near those at which it left the brewery. This condition is harder to maintain with metal packages, although their insulation with hair felt and with wood helps a great deal. If an insulated container becomes warm, though, dispensers have a tough time cooling it.

Aluminum packages, although O. K. if made of pure aluminum (impure aluminum will pit and become sponge-like through corrosive action of lactic acids in beer), have not come into extensive use in America.

Up to the fermenting stage the manufacture of ale and beer is quite similar, according to the Stroh engineer. The same basic materials are used, but the mash has a higher alcoholic content, and an ale yeast is used. This yeast rises to the top instead of settling to the bottom like lager yeast.

Ale has a more pungent flavor, is more highly hopped, and is much more intoxicating. In England ale is even fortified with corn-sugar alcohol. Over there ale is often drunk flat—without gas—at room temperatures.

Beer Cooling by Seitz

Second speaker of the evening was D. C. Seitz, chief engineer of the Russ Mfg. Co., Cleveland manufacturer of soda fountains and beer-cooling equipment. Mr. Seitz explained some new discoveries in the field of beer dispensing, bringing out the fact that there is a definite relationship between pressure and temperature at which beer should be kept to preserve its CO_2 gas content.

At the start of his talk, he pointed out that one of the chief difficulties facing manufacturers of beer dispensers is the elimination of wild beer—beer which is served with too much foam in the glass or stein.

In their first work in the design of beer coolers, the equipment manufacturers considered beer as a carbonated beverage just like soda water or ginger ale, and assumed that the same laws would be applicable to beer serving as other carbonated beverages.

It soon appeared, however, that the problem was complicated by the necessity of retaining the original bouquet or aroma of the beer, and the need for maintaining the proper CO_2 gas content.

Solubility of Gas in Beer

This introduced the following question: What is the solubility of CO_2 gas in beer? Subsequent research indicated that beer will hold about two and one-half times its volume in CO_2 gas at the temperature and pressure at which it is racked.

The most important fact to be considered in cooling and dispensing beer is that there is a fixed relation between the pressure and temperature of beer which will retain the natural CO_2 content. This may be charted as a curve with pressure as the ordinate and temperature as the abscissa, the curve for beer with 2½ volumes of CO_2 gas running in nearly a straight line from 13 lbs. pressure and 40° F. temperature to 31 lbs. and 65° F.

Pressure-temperature conditions below this curve will not hold the proper CO_2 in beer, while conditions above the curve will be entirely adequate in their gas-retaining properties. The relationship is not entirely stable, he said, since agitation will accelerate the tendency to release gas.

To keep original gas content in the beer, sufficient pressure must be maintained in the keg, and the beer must be cooled quite rapidly as its pressure is reduced in passing through the cooling and dispensing apparatus, he said.

Problem of Foam Control

Satisfactory operation of a beer dispenser is directly connected with the problem of controlling the foam or collar on each glass of beer, according to Mr. Seitz. He believes that a 30 per cent collar on a glass is the maximum—if a glass has more than this, the customer is apt to complain of not receiving enough beer—if a glass has less, the dispenser may be losing money, particularly if he is selling at a low price per glass.

"The collar must be attractive looking, and must be of sufficient body so that it won't disappear in two minutes," he said. This brought the speaker to the question of what a collar is.

"In root beer, the foam or collar is released CO_2 gas coated with root beer syrup, in small enough bubbles so that they will not burst easily," he stated. "It is the same in beer, except that the bubbles are covered with a malt mixture."

Foam is caused in a glass, he said, by mechanical agitation and by the natural release of CO_2 gas with the reduction in pressure to atmospheric. The first is demonstrated by stirring a glass of ginger ale with a spoon, releasing practically all the gas, and leaving a bad-tasting sweet liquid.

Since foam caused by natural release of the gas is not under the control of the bar tender, the equipment designer must provide apparatus which takes care of that factor, leaving the factor of mechanical agitation to the bar tender, he continued.

Fortunately, he said, a collar of approximately 20 per cent is produced by releasing the pressure at the faucet under normal conditions, giving the dispenser, the opportunity to deviate from this amount by varying the agitation as he wishes. Thus, he can increase the agitation (and foam) by holding the glass far away from the faucet in drawing, and can decrease it by drawing closs to the faucet or by pouring the beer down the side of the glass.

The blame for wild beer is frequently laid on the brewer, Mr. Seitz said, when as a matter of fact there is no such thing as "making wild beer" because wild beer is the result of improper design or operation of the dispensing equipment. For instance, he cited the case of a bar tender who gets a shipment of beer under a pressure of 18 lbs. and places a 12-lb. keg pressure on it, thereby developing the condition of wild beer because that pressure is too low.

"Wild beer is the result either of lowering the pressure too much, or of raising the temperature without raising the pressure," he declared.

This same bar tender may then go downstairs and "bleed the keg" by loosening the connections so that the pressure is reduced. This eliminates wild beer, Mr. Seitz admitted, but also releases so much CO_2 gas that the beer becomes "flat."

The most practical method of securing the rapid heat transfer needed for cooling beer according to its pressure-temperature relationship is the instantaneous cooler, Mr. Seitz believes, although finely cracked ice might be used, as could a direct expansion coil in a water bath with a mechanical agitator to increase the rate of heat transfer.

To use the instantaneous cooler, the engineers of his company have designed a special cooling coil to obtain the desired pressure drop, he reported.

In addition to the two above-mentioned causes of foam (mechanical agitation and natural CO_2 release), there is another reason, Mr. Seitz stated. That is violently changing the path of the beer as in the faucet.

ASRE SPEAKER DESCRIBES USE OF OIL FOR A BRINE

(*Concluded from Page 1, Column 5*)

oil and operated for several months. During this test period the cabinet operation was carefully checked and found to be satisfactory, he said.

The specific heat of this oil, according to Mr. Herman, is .445 at 0° F. This compares with about .70 for calcium chloride, and because of the lower specific heat, with the same control setting, operating cycles are somewhat more frequent.

After another local dairy had begun to use the oil in quantities, the San Francisco office of the Standard Oil Co. did some experimental work with a dairy in that locality with results as good as on the original installations.

It was found, however, that on very long cabinets where the chilling unit was in the middle, slightly more than the normal temperature difference was noted between the middle and ends of the cabinet. This was evidently due to the fact that the viscosity of the oil increased with lowering temperatures and circulation became somewhat retarded.

Now, only a few months after the first tests were made, the new oil is being specified for brine tank installations to be made aboard ship.

Without the tax, the cost of the oil is about 23 cents per gallon. It is made from emulsion proof stock and avoids electrolytic action, allowing the use of soldered galvanized tanks, Mr. Herman claimed.

Following the talk a number of questions were asked. Some of these were:

Q. What is the flash point of this oil?

A. Over 260° F.

Q. What is its viscosity and specific gravity?

A. The viscosity is about 65 secs. at 100° F., and the specific gravity is .85 to .87.

Q. Would this oil be suitable for ice plant work?

A. We already have a request for a quotation on 40,000 gallons for such an installation, but there are several difficulties. First, water overflow would settle to the bottom and freeze. Second, removal of the ice cans from the oil would spread the oil over floors, making them extremely slippery.

Q. Would it be suitable for brine circulating systems?

A. Yes, it should be, if temperatures are not so low as to increase viscosity too much.

TOLEDO FIRM INTRODUCES BEER COIL CLEANER

TOLEDO—The Rex beer coil cleaner, which employs a chemical charge and faucet water, has been introduced by the Alloy Foundry & Machine Co. of this city.

A unique feature of design subjects the chemical to a swirling action that speeds up the dissolving of the charge.

In the Rex cleaner the intake is at the bottom of the conical shaped bowl, and the outlet at the top. By this arrangement the chemical charge is concentrated at the point of water inlet, and the mixed solution taken off the top. Cleaning of the coil and beer line can be completed in 5 to 10 minutes.

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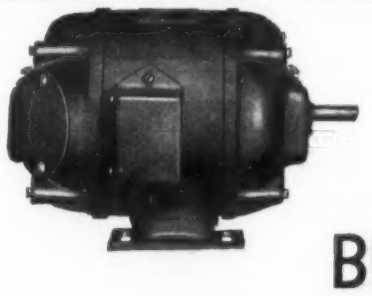

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See Century Electric Company Display, Electrical Building, Century of Progress.

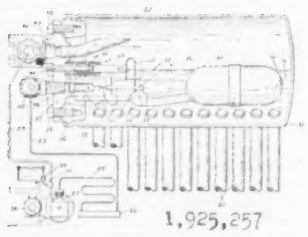
PATENTS

ISSUED SEPT. 5, 1933

1,925,166. COMPRESSION UNIT FOR REFRIGERATING SYSTEMS. Robert L. Alexander and James R. McCallum, Clinton, Iowa, assignors to The Climax Engineering Co., Clinton, Iowa, a corporation of Delaware. Application Aug. 21, 1930. Serial No. 476,736. 1 Claim. (Cl. 230—139.)

A compression unit for a refrigerating machine comprising a closed container including a base plate constituting a pressure retaining wall of the container, a supporting plate mounted in the container above and in spaced relation to said base plate, a bearing in said supporting plate and a shaft in said bearing, a piston and a cylinder surrounding said shaft below said supporting plate and in engagement with the lower surface thereof and with the upper surface of the base plate, a motor rotor on said shaft above said supporting plate and a motor stator carried on said supporting plate and surrounding said rotor.

1,925,257. REFRIGERATING APPARA-



1,925,257

TUS. Jesse G. King, Dayton, Ohio, assignor to Frigidaire Corp., Dayton, Ohio, a corporation of Delaware. Application March 31, 1930. Serial No. 440,523. 4 Claims. (Cl. 137—68.)

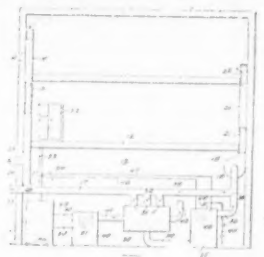
1. An evaporator for a refrigerating system comprising in combination, a closed evaporating chamber containing a quantity of liquid refrigerant, an inlet connection and an outlet connection for said chamber, said outlet connection being disposed above the quantity of liquid refrigerant in said chamber, refrigerant flow control means for controlling the flow of liquid refrigerant to said chamber through said inlet connection and for preventing liquid refrigerant from rising above a predetermined level in said chamber, said control means including a float within the chamber responsive to the level of liquid refrigerant therein and a valve operatively connected with said float, the walls of said chamber having a flexible portion, and means for varying the buoyant effect of said float, said last named means being operatively connected with the flow control means and said flexible wall portion and including adjustable means exterior of the chamber and associated with said flexible wall portion for flexing the same.

1,925,281. CONTROL VALVE. John R. Replogle, Detroit, Mich., assignor to Copeland Products, Inc., a corporation of Michigan. Application Dec. 14, 1931. Serial No. 581,038. 19 Claims. (Cl. 62—3.)

1. A refrigerating system having a condensing unit including a condenser water circulating system and separate means responsive to the condenser water temperature and to the condition of operation of the condensing unit for controlling the flow of water in said water circulating system.

1,925,308. REFRIGERATOR LATCH. George Earl De Voe, Grand Rapids, Mich., assignor to Winters & Crampton Mfg. Co., Grandville, Mich., a corporation of Michigan. Application July 29, 1932. Serial No. 625,645. 4 Claims. (Cl. 292—221.)

1. In a latch structure, a unit integral support having spaced apart connected sides, a supporting ledge carried by said



1,925,308

support between said sides, a rod extending through said ledge and guided thereby, spring means around said rod bearing against the ledge at one end, means on the rod bearing against said spring at the other end thereof, a latch bolt pivotally mounted on said support between the sides thereof and adjacent the inner end of the support and to one side of the inner end of said rod, said latch bolt including spaced apart arms extending from its pivot one to either side of the inner end of the rod, and a pin passing through the inner end of said rod and said arms, as specified.

1,925,361. ABSORPTION REFRIGERATING MACHINE. Edmund Altenkirch, Neuenhagen, near Berlin, Germany, assignor, by mesne assignments, to The Hoover Co., North Canton, Ohio, a corporation of Ohio. Application May 22, 1929, Serial No. 365,201, and in Germany May 22, 1928. 15 Claims. (Cl. 62—119.5.)

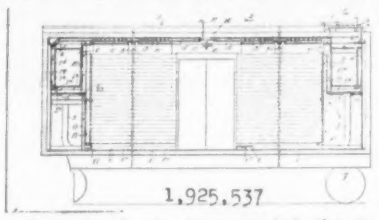
13. The method of stabilizing the operation of a continuously operable absorption refrigerating apparatus having a device for changing a refrigerant to a more dense fluid phase and an absorber, which method includes the steps of causing gas to flow from the absorber to said device when the pressure in the latter is lower than that in the absorber, causing gas to flow from said device to the absorber when the pressure in said device is higher than that in the absorber and resisting the flow in one direction by passing the gas through a liquid.

1,925,407. REFRIGERATING SYSTEM. Emil Sieloff, St. Louis, Mo., assignor to Sieloff Packing Co., St. Louis, Mo., a corporation of Missouri. Application Feb. 16, 1933. Serial No. 656,983. 5 Claims. (Cl. 261—116.)

1. A refrigerating system for a cooling chamber comprising oppositely spaced refrigerating units, each including a trough extending across the cooling chamber and positioned adjacent to one wall thereof and to the floor of said chamber, three spaced walls forming longitudinal parallel chambers the outer one of which is provided with an inlet opening in the side thereof and the inner one of which is provided with an outlet opening above said inlet opening and adjacent to the ceiling of the cooling chamber, a spray header extending longitudinally of the upper part of the outer chamber, and a plurality of sprays supported by said header and directed downwardly.

1,925,537. REFRIGERATING APPARATUS AND METHOD. David H. Killeffer, Yonkers, N. Y., assignor to Dryice Equipment Corp., New York, N. Y., a corporation of Delaware. Application April 26, 1930. Serial No. 447,470. 17 Claims. (Cl. 62—91.5.)

2. A refrigerator comprising an outer casing and a refrigerating system including a receptacle for solid carbon dioxide



1,925,537

and a closed circuit connected thereto serially including a downflow conduit, a low level conduit having a restricted outlet, an upflow conduit having a restricted outlet and a high level return conduit discharging in heat exchange relation with the solid carbon dioxide, but not in contact therewith.

1,925,549. REFRIGERATING MECHANISM. Frank R. West, Highland Park, Mich., assignor to Copeland Products, Inc., a corporation of Michigan. Application Dec. 4, 1929. Serial No. 411,401. 8 Claims. (Cl. 62—4.)

1. In a refrigerating mechanism, in combination, an evaporator, a bracket having a passage therein forming a part of the discharge passage for the evaporator and constructed of metal having high heat conducting properties, and temperature control means including a temperature responsive bulb disposed in direct metallic contact with said bracket and means associated with said bracket for clamping the latter upon said bulb.

1,925,556. MOTOR-COMPRESSOR UNIT. Ransom W. Davenport, Detroit, Mich., assignor to Chicago Pneumatic Tool Co., New York, N. Y., a corporation of New Jersey. Application Feb. 27, 1929. Serial No. 343,177. 5 Claims. (Cl. 230—207.)

1. A pump for use in heat transforming systems comprising a casing providing a lubricant reservoir, a discharge chamber and a separating chamber in superposition, baffle means in said last named chamber for facilitating the separation of vapor from lubricant entrained therewith, a passage leading from said separating chamber to the working parts of said pump and to said reservoir, said passage determining the quantity of lubricant retained in said separating chamber, and means in said passage continuously providing a liquid seal to prevent vapor from passing therethrough.

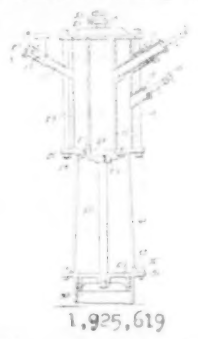
1,925,601. AUTOMATIC HUMIDITY REGULATING MECHANISM FOR HEATING SYSTEMS. Frederic D. Pfening, Columbus, Ohio, assignor to The Fred D. Pfening Co., Columbus, Ohio, a corporation of Ohio. Application Oct. 22, 1931. Serial No. 570,422. 3 Claims. (Cl. 126—113.)

1. Water vapor generating apparatus for a house heating system, comprising an outer casing having an air outlet at the upper end thereof an inner casing narrower in width positioned centrally of the outer casing to provide air passages therebetween which communicate with said outlet, an open topped water containing trough closing the upper end of said inner casing, a burner arranged within the inner casing, a fuel line leading to said burner, a fuel flow controlling valve in said line, and an electrically driven fan having its outlet side positioned at the lower end of the outer casing and in communication with the air passages therein, whereby the air from said fan will be advanced through said passages and over the open top of said trough and out through the outlet in the upper end of said outer casing.

1,925,616. ICE MACHINE. Rene Velut, Paris, France. Application April 13, 1932, Serial No. 605,023, and in France April 20, 1931. 7 Claims. (Cl. 62—108.)

1,925,619. METHOD AND APPARATUS FOR MAKING CARBON DIOXIDE ICE. Frank R. Zumbro, Waynesboro, Pa., assignor to Frick Co., Waynesboro, Pa., a corporation of Pennsylvania. Application April 28, 1930. Serial No. 448,049. 6 Claims. (Cl. 62—121.)

1. The method of making carbon dioxide ice which consists in mixing together car-



1,925,619

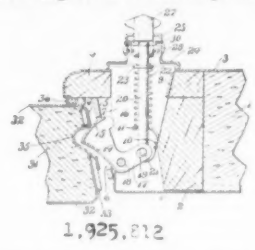
bon dioxide snow and carbon dioxide liquid, subjecting the same to a pressure of approximately 60.4 pounds to the square inch and surrounding the said mixture of snow and liquid with a substance having a temperature below the freezing point of the snow and liquid, substantially as set forth.

1,925,660. HUMIDIFIER. Harold A. Greenwald, Detroit, Mich., assignor, by mesne assignments, to Whitehead & Kales Co., River Rouge, Mich., a corporation of Michigan. Application Feb. 25, 1929. Serial No. 342,647. 7 Claims. (Cl. 126—350.)

4. In a humidifying system, a retort, a steam pipe, means connecting said pipe to said retort, a float chamber adjustably supported by said means for vertical movement relative thereto for controlling the depth of water in said retort and said means, and means for conducting water from said chamber to said connecting means whereby simultaneously water is conducted to and steam discharged from said retort through said connecting means.

1,925,812. DOMESTIC AIR CONDITIONING. Ernest B. Miller, Baltimore, Md., assignor to The Silica Gel Corp., Baltimore, Md., a corporation of Maryland. Application June 7, 1930. Serial No. 459,806. 17 Claims. (Cl. 62—176.)

1. The method of cooling and conditioning a building or the like comprising con-



1,925,812

tacting air and a moisture sorbent, spraying water through said air, delivering the air to the building, evaporating a refrigerant to cool the spray water, adsorbing the vapor of the refrigerant in a porous adsorbent, burning a fuel, and using the heat to restore the adsorbent and sorbent.

1,925,907. AIR CONDITIONING DEVICE. John W. Norris, Marshalltown, Iowa, assignor to Lennox Furnace Co., Marshalltown, Iowa. Application Jan. 13, 1933. Serial No. 651,484. 17 Claims. (Cl. 261—90.)

1. In a device of the class described, a casing having an air passage provided with eliminator plates, a reservoir below the plates adapted to receive drainage therefrom, a panel forming a part of the casing wall, a motor outside the panel, a spray producer inside the panel, operatively connected with the motor, for producing a spray of water across the path of air travel to the plates, comprising an inclined disc having an annular inclined flange, a pump mechanism carried by the panel for carrying water from the reservoir and discharging it against the back of the disc and operated from the motor.

REISSUE

18,934. HUMIDIFYING DEVICE. Edward C. Rosenow, Rochester, Minn. Original No. 1,817,648, dated Aug. 4, 1931, Serial No. 309,449, Oct. 1, 1928. Application for reissue Sept. 10, 1932. Serial No. 632,625. 11 Claims. (Cl. 299—23.)

5. A humidifier comprising in combination an elongated receptacle adapted to extend lengthwise within a heating radiator and to contain water, an absorbent member arranged in said receptacle longitudinally thereof and projecting therefrom for taking moisture by capillary attraction from the receptacle, and a plurality of absorbent sheets supported on edge across the receptacle and said first named absorbent member and having close fitted engagement with said first named absorbent member at spaced intervals therealong effective for taking moisture by capillary attraction from said first named absorbent member.

ELECTRIC ASSOCIATION MAILS AIR-COOLING BOOK

PHILADELPHIA — Heavy linen-finished paper, fine copper half tones of photographs, and a personal touch provided by the addressee's name in gold on the front cover go to make up a handsome prospect mailing piece entitled "Custom Weather" which is being sent out by the Electrical Association of Philadelphia.

Running through the booklet is a personal letter to the prospect, typewritten on association letterhead and signed by George Conover, managing director, telling of the benefits of air conditioning. Advertisements and photographs illustrating air conditioning's application in office buildings, stores, restaurants, factories, and homes are shown with the letter.

A brief history of air conditioning and an exposition of the principles and physiological aspects involved are also included.

For further information, the prospect is pointed to member companies of the air-conditioning group of the association, whose names and addresses are listed on the last page.

THE DOCTOR WAS ONLY A PROSPECT TO HIM

POUGHKEEPSIE, N. Y.—Even an accident can be turned to good advantage, according to J. Gordon Pollard, salesman for J. Schoonmaker & Son of Beacon, N. Y. While convalescing in the hospital he sold a Frigidaire to his physician, Dr. J. R. Bolton, and kept up a direct mail campaign with his prospects.

NORGE NEWS ISSUED

DETROIT—A new house organ for dealers and salesmen, "Norge News," is being issued by Norge Corp. here. The monthly is edited by James A. Sterling, advertising and sales promotion manager of the company.

BOOKS

"Fan Engineering." Editor: Richard D. Madison, under the direction of Willis H. Carrier. Number of pages: 621. Date of Publication: 1933. Publisher: Buffalo Forge Co., Buffalo, N. Y. Price: $3.

Correlating much of the existing technical data on mechanical air movement and distribution, this new third edition of the handbook put out by Buffalo Forge Co., a pioneer fan manufacturer, will be of considerable value as a reference handbook for engineers occupied with air conditioning, combustion, conveying, and other applications of fans.

Main change in this edition of the handbook is expansion of the sections dealing with fans for air conditioning, both in the first chapter on fundamental properties of air, and in subsequent sections on air flow, ventilation, proportion air flow in pipes, dehumidifying, selection of fans, and other subjects of importance to the air-conditioning engineer.

The book is divided in three distinct parts. Part I deals with physical properties of air, heat and humidity, and the flow of air in general as it is produced by fans.

Part II discusses the application of air movement to different classes of work in which fans are employed. This part has been rewritten in this new edition to include new research data and current practices in air conditioning and combustion.

Part III contains performance tables and general information about standard apparatus (particularly Buffalo Forge's) for use in applying fans to industry. Final pages of the book are devoted to an extensive appendix of specifications, engineering codes, and miscellaneous data useful in fan engineering work.

The handbook is provided with a complete cross-referenced index.

KELVINATOR INSTALLED IN NORTHERN CANADA

DETROIT — Farthest north of all Kelvinator installations is the one completed a short time ago by Kelvinator of Canada, Ltd., at Ft. Smith, Northwest Territories.

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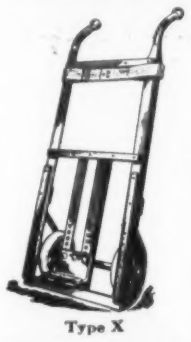

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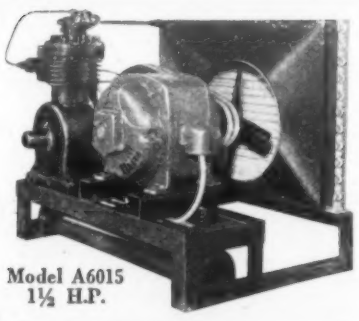
5145 Liberty Ave. Pittsburgh, Pa.



Model A6015
1½ H.P.

PARKER MANUFACTURING CO.

REFRIGERATION UNITS — 1-6 to 5 H.P.
AMMONIA - METHYL SO² - FREON

DEALERS WANTED

FACTORY
2625 Santa Fe Ave., Los Angeles, Calif.

DETROIT LUBRICATOR COMPANY
TRUMBULL, LINCOLN, MARQUETTE & VIADUCT
DETROIT, MICH.

Manufacturers of "Genuine Detroit" Automatic and Thermostatic Expansion Valves, American Cube-makers, American Refrigeration Sections, Automatic Controls for Temperature and Pressure, Electric Valves for Refrigerant and Water Control, Thermostats, Humidistats and complete controls for Air Conditioning.

Descriptive literature gladly sent upon request

Division of
AMERICAN RADIATOR & STANDARD SANITARY CORPORATION

Export of Electric Refrigerators

June, 1933, Shipments Reported by the Bureau of Foreign and Domestic Commerce, Washington, D. C.

	Electric Household Refrigerators		Electric Commercial Refrigerators Up to 1 Ton		Parts for Electric Refrigerators
	Number	Value	Number	Value	Value
Austria	...	...	...	...	156
Belgium	59	$ 4,520	36	$ 3,298	$ 4,474
Czechoslovakia	19	702	...	...	5,636
Denmark	...	...	...	...	678
Finland	...	...	2	206	41
France	258	21,318	212	19,257	13,566
Germany	90	4,033	41	2,120	7,803
Gibraltar	...	...	1	233	...
Greece	5	525	...	...	...
Irish Free State	1	74	1	118	...
Italy	82	5,658	85	4,184	2,189
Malta, Gozo, and Cyprus	8	639	...	...	...
Netherlands	283	17,665	61	8,449	7,244
Norway	45	3,250	24	2,374	1,370
Poland and Danzig	...	...	1	107	...
Portugal	36	3,101	8	983	505
Rumania	...	...	...	...	71
Soviet Russia in Europe	1	211	...	...	...
Spain	44	3,117	22	1,357	2,829
Sweden	122	8,257	8	746	938
Switzerland	127	7,180	57	4,359	20,476
United Kingdom	1,641	102,134	153	10,298	43,520
Yugoslavia	13	890	13	1,293	590
Canada	499	20,968	94	7,557	20,334
British Honduras	1	85	...	...	...
Costa Rica	5	292	...	...	...
Guatemala	4	281	...	...	33
Honduras	33	3,795	...	...	20
Nicaragua	8	613	...	...	199
Panama	31	3,433	4	623	1,127
Salvador	5	584	...	...	...
Mexico	154	13,072	1	200	6,615
Newfoundland and Labrador	8	740	...	...	...
Bermudas	40	3,689	11	1,440	633
Barbados	10	773	...	...	...
Jamaica	11	1,687	...	...	15
Trinidad and Tobago	2	219	...	...	28
Other British West Indies	9	649	...	...	25
Cuba	60	5,299	5	420	2,709
Dominican Republic	19	1,770	...	...	105
Netherland West Indies	20	1,702	...	...	16
French West Indies	5	490	...	...	...
Haiti, Republic of	3	190	...	...	48
Virgin Islands of U. S.	5	676	...	...	40
Argentina	132	7,582	26	3,404	7,280
Brazil	131	12,123	16	1,219	5,710
Chile	1	100	...	...	18
Colombia	32	3,190	...	...	180
British Guiana	2	120	2	462	...
Surinam	1	200	...	...	...
Peru	2	140	...	...	383
Uruguay	...	...	...	...	143
Venezuela	27	2,252	1	130	131
Aden	1	242	...	...	21
British India	203	17,840	7	792	2,260
British Malaya	38	3,663	...	...	147
Ceylon	6	403	...	...	30
China	20	3,269	3	309	1,815
Netherland East Indies	75	9,251	15	2,902	875
French Indo-China	3	269	...	...	...
Hong Kong	66	6,660	9	727	475
Iraq	1	50	...	...	...
Japan	19	2,284	...	...	4,519
Palestine	18	1,902	1	910	460
Philippine Islands	62	5,496	17	4,213	545
Siam	11	979	...	...	184
Syria	5	290	...	...	87
Turkey	60	3,990	10	1,093	160
Other Asia	2	176	...	...	...
Australia	100	4,262	1	640	4,940
New Zealand	11	835	...	...	381
British East Africa	...	...	...	...	36
Union of South Africa	111	12,016	7	676	2,264
Other British South Africa	2	286	...	...	133
Other British West Africa	...	...	...	...	16
Egypt	19	1,800	4	363	297
Algeria and Tunisia	158	11,349	32	3,710	2,182
Madagascar	...	...	...	...	44
Other French Africa	2	147	2	248	...
Italian Africa	...	...	...	...	125
Morocco	142	11,142	...	...	2,451
Mozambique	1	195	...	...	10
Canary Islands	2	168	4	237	112
Other Spanish Africa	13	727	...	...	...
Total	5,245	$369,679	997	$ 91,657	$182,447
Shipments to Hawaii	244	$ 21,991	7	$ 496	$ 4,016
Puerto Rico	72	$ 7,840	3	$ 1,013	$ 1,676

SPINKS WINS PRIZE IN WESTINGHOUSE CONTEST

EAST PITTSBURGH, Pa.—Wayne Spinks, president of the Wayne Spinks Co., Memphis, Tenn., was presented a Pontiac Sedan recently, his prize in a nation-wide radio contest conducted by the Westinghouse Electric & Mfg. Co. for its dealers and employes.

The contest, for which more than 100,000 dealers and salesmen handling Westinghouse household products were eligible, carried through a five months NBC chain broadcast, was based entirely upon the company's new merchandising slogan "Every House Needs Westinghouse."

Rules of the contest required the contestant to listen to each radio program and at the conclusion of the series to estimate the number of times the slogan was broadcast and to write a letter outlining how he had used the slogan and the radio broadcast in his sales work.

TAKE ELECTROLUX HOME IN AUTO TRAILER

DALLAS, Tex.—Because they could not buy an Electrolux refrigerator from any utility company near them (reason: Oklahoma's law prohibiting appliance merchandising by utilities), B. W. Manning and his wife of County Line, Okla., recently drove 120 miles to Dallas, purchased an Electrolux from the Dallas Gas Co., loaded it in a trailer, drove back home.

Iowa-Nebraska Power Sells Electrolux

LINCOLN, Neb. — Appearance of Electrolux gas refrigerators in display rooms of the Iowa-Nebraska Power Co. marks this company's initial activity in merchandising gas refrigeration.

Announcement that the company had taken on the line was made by Stanley Taber, assistant general manager in charge of merchandising, at a recent meeting attended by 120 sales supervisors and salesmen from the utility's branches.

Advertising appropriations have been increased and special campaigns have been prepared to push Electrolux sales during the fall and winter, according to Mr. Taber.

Circular Refrigerators Built in Germany

WASHINGTON, D. C.—Electric refrigerators of circular shape have recently been introduced in Germany, according to a report recently received by the U. S. Department of Commerce from its trade commissioner in Berlin.

It is claimed, according to the report, that the circular form of evaporator insures a more even temperature in the cooling compartment. Capacity of the new German refrigerator is said to be equal to that of refrigerators of the usual shape.

CLASSIFIED

PAYMENT in advance is required for advertising in this column.

RATES: Fifty words or less, one insertion $2.00, additional words four cents each. Three insertions $5.00, additional words ten cents each.

REPLIES to advertisements with box numbers should be addressed to the box number in care of Electric Refrigeration News, 550 Maccabees Bldg., Detroit, Mich.

POSITIONS WANTED

HEATING AND AIR-CONDITIONING ENGINEER: Ten years' experience, desires a position with some well established Manufacturer or Distributor. Experienced in design, sale, installation and service of Air-Conditioning, Oil Burners, and Gas Equipment. Present Sales Manager for a Frigidaire Dealer, also 1933 B.T.U. Club Member. Willing to travel. Box 588.

POSITIONS AVAILABLE

WANTED: DISTRIBUTORS and salesmen for a line of unit coolers which are equipped with automatic humidity control and humidification. These coolers reduce the cost of refrigeration 50% and maintain relative humidity constantly at any level desired, thereby eliminating the drying and shrinkage of commodities, saving the merchants hundreds of dollars yearly.

We also have an attractive proposition to offer dealer-contact men who are in a position to finance themselves. Box 589.

REPRESENTATION AVAILABLE

THE Facilities and Services of the Grand Central Purchasing Corp. with large showrooms located at 114 East 47th St., N. Y. C., are available to represent a substantial manufacturer of major or small electric appliances. The corporation has close contact with all classes of outlets in the metropolitan area and northern New Jersey for refrigerators, radios, washers, vacuums, mixers, etc.

PUMP INDUSTRY HEARING HELD SEPT. 5

WASHINGTON, D. C.—Joint hearings on codes filed by the compressed air industry, heat exchange industry, and Hydraulic Institute for the pump manufacturing industry were held Sept. 5 in the Mayflower hotel by Deputy Administrator Malcolm Muir.

Successful Graduates

THROUGHOUT the industry graduates of U. E. I. will be found holding positions of responsibility. Most of these men started in minor jobs, but quickly proved that their added knowledge, added resourcefulness and added initiative made them worthy of advancement.

UTILITIES ENGINEERING INSTITUTE
Wells at Kinzie Street, Chicago, Ill.
Complete and practical Refrigeration Training by extension methods.

McCORD REFRIGERATION PRODUCTS

▼ ▼

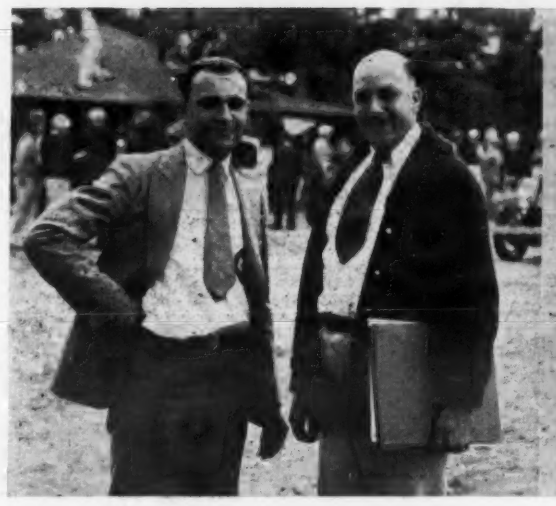
Commercial Evaporators
Domestic Evaporators
Condensers
McCord Ice Trays
Spiral Finned Tubing
Spiral Copper Finned Iron,
Steel or Copper Pipe

▲ ▲

McCORD RADIATOR & MFG. CO.
DETROIT - - MICH.

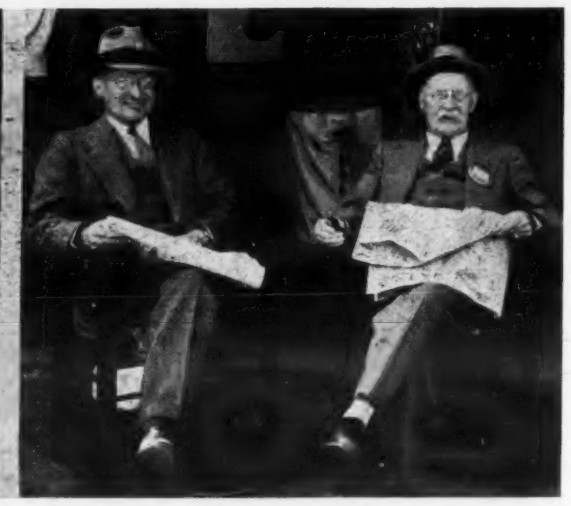
Gibson Men Relax at Camp Shiwandossee

'All Play and No Work' is Keynote of Three-Day Outing For Distributors and Quota-Busting Dealers

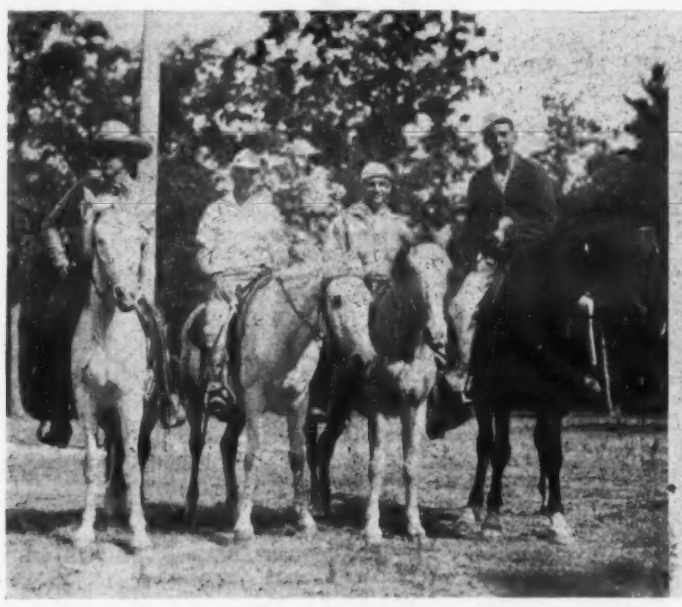


J. W. Prebola and H. D. MacRae of the Rochester Gibson distributorship pause for a camera smile as they return from a baseball game.

Distributors, dealers, and factory men sit for a picture before making a mad dash for their unfinished sports contests. In front, left to right: Vice President John Lewis, President Gibson, John Christenson, Eastern Manager Young, and Allen Church.

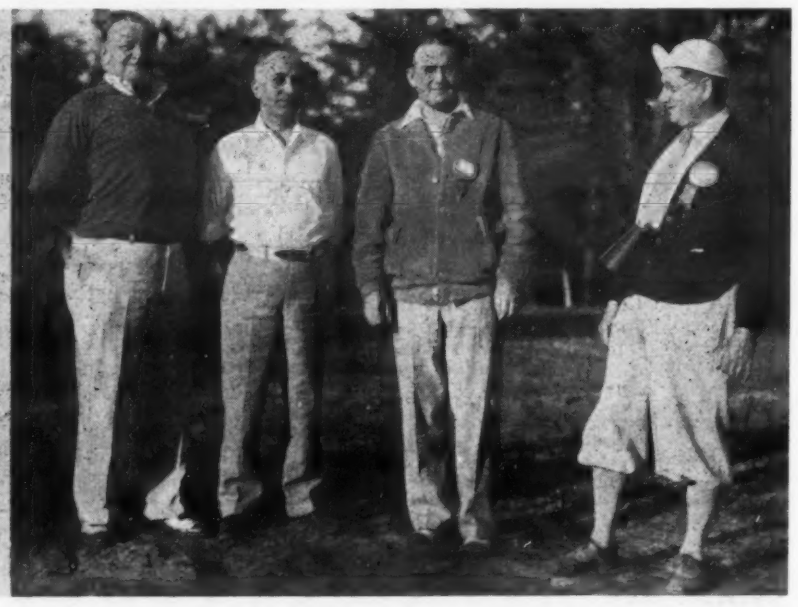


Seventy-nine-year-old John Lewis and his son enjoy copies of the Greenville News outside of Camp Shiwandossee headquarters.



Distributor MacRae and John Prebola of Rochester, and Alex Jones of Syracuse give three horses a break by taking them for a gallop through the woods. Caretaker Hoefokker goes along.

Commercial Manager Cheetham (in the purchasing agent's uniform) and Harold Worm all set for the driving contest on the Whitehall links.



Bill Marshall (extreme right) likes the looks of these three star performers. Left to right, they are E. H. McCarthy, midwest sales manager; Jack Stone, Minneapolis distributorship manager; and Herb Young, eastern manager.

Max Hegelman of Albany catches up on a little of the sleep he didn't get in his tent the night before.

Distributor Whitney of Chicago and C. J. Gibson violate a camp rule by taking a few moments to discuss business prospects for 1934.

Here, from left to right, are Victor Zarick of Hibling, Minn.; C. H. Badger, Gibson comptroller; and Charles Horowitz, export manager, engaged in a lively session.

F. A. Delano (left), assistant to the vice president, and Glenn Ryder of Worcester, N. Y., enjoy some Michillinda sunshine together.

Several Gibson men bask in the mid-morning sun outside the camp's mess hall to watch the antics of amateur surf-boarders on Duck Lake. In the foreground are L. V. Whitney, Chicago (left), and President C. J. Gibson.

Advertising Manager Marshall greets A. J. Parenti of Bakersfield, Calif., who traveled farthest to the camp.

"My boy, we're proud of you," say Vice President Frank S. Gibson (left) and W. R. Marshall as they gaze with admiration at the stubble which won first honors for John Wood of Brooklyn in the whisker-growing contest.

A Century of Progress Supplement

THE NEWSPAPER OF THE INDUSTRY

ELECTRIC

REFRIGERATION NEWS

WRITTEN TO BE READ ON ARRIVAL

Registered U. S. Patent Office

ESTABLISHED 1926. MEMBER AUDIT BUREAU OF CIRCULATIONS. MEMBER ASSOCIATED BUSINESS PAPERS.

VOL. 10, NO. 3, SERIAL NO. 235
ISSUED EVERY WEEK

Copyright, 1933, by Business News Pub. Co.

DETROIT, MICHIGAN, SEPTEMBER 20, 1933

Entered as second-class matter Aug. 1, 1927

IN TWO PARTS, PART TWO
TEN CENTS PER COPY

Because he is president of the strong American Gas Association, which will meet in Chicago next week, Arthur Hewitt (above) figures prominently in the day's news.

Seen against the rays of a setting sun, the "sky-hung dome" unit (right) of the Travel and Transport Bldg. at A Century of Progress, is turned into a cubistic painting by the photographer.

C. A. Miller, sales manager of Servel Sales, Inc., points out the sturdy construction of a Servel heavy duty commercial refrigerating machine to Miss Florence Woods, "Miss Indiana, 1933." Daughter of a prominent Evansville physician, Miss Woods, who will soon compete in Atlantic City for the title of "Miss America," is considered "our baby" by employes of the Servel-Electrolux-Hercules factory in Evansville.

Just how the Electrolux gas refrigerator works is demonstrated in the apex of the Servel-Electrolux exhibit (right) in Home Planning Hall of A Century of Progress, Chicago's Fair.

Japanese maidens pause demurely on a rustic bridge in a court of their country's exhibit at A Century of Progress.

"Mama! A mountain lion—or something!" But the papoose in arms doesn't seem so perturbed as his brother. They're on the Fair's Hopi reservation.

From the northern end of the Fair grounds (above right), gorgeous fireworks are shot off to accelerate pulses of hundreds of thousands of visitors to the Fair. More than 12 million persons have attended.

About the only modern note in this exhibit of the Southern Cypress Association (below) is the Electrolux refrigerator—which, ladies and gentlemen, is not in the kitchen of the cypress log-cabin home, but in the dining room!

Two air-cooled Electrolux gas refrigerators preserve the food for these incubator babies. Dr. M. A. Couney, who operates the baby incubatoriums at Coney Island and Atlantic City, runs this one at A Century of Progress, too.

Eleven Eskimo huskies (right) from Admiral Byrd's South Pole ship block traffic with this dog sled driven by one of the mushers who was a member of the expedition. Both ship and dogs may be seen at the Fair.

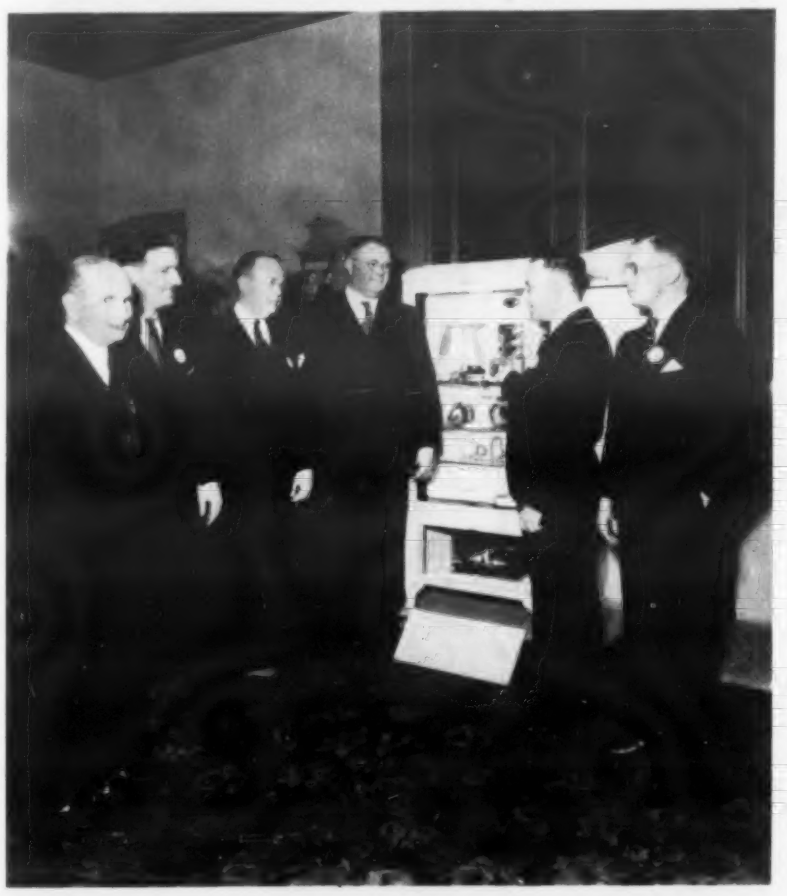
F. M. Banks, general superintendent of sales, Southern California Gas Co., Los Angeles, will be one of the chief speakers on the program at the annual convention of the American Gas Association in Chicago next week. Mr. Banks will discuss methods of merchandising gas refrigeration, drawing from his experience in selling Electrolux refrigerators.

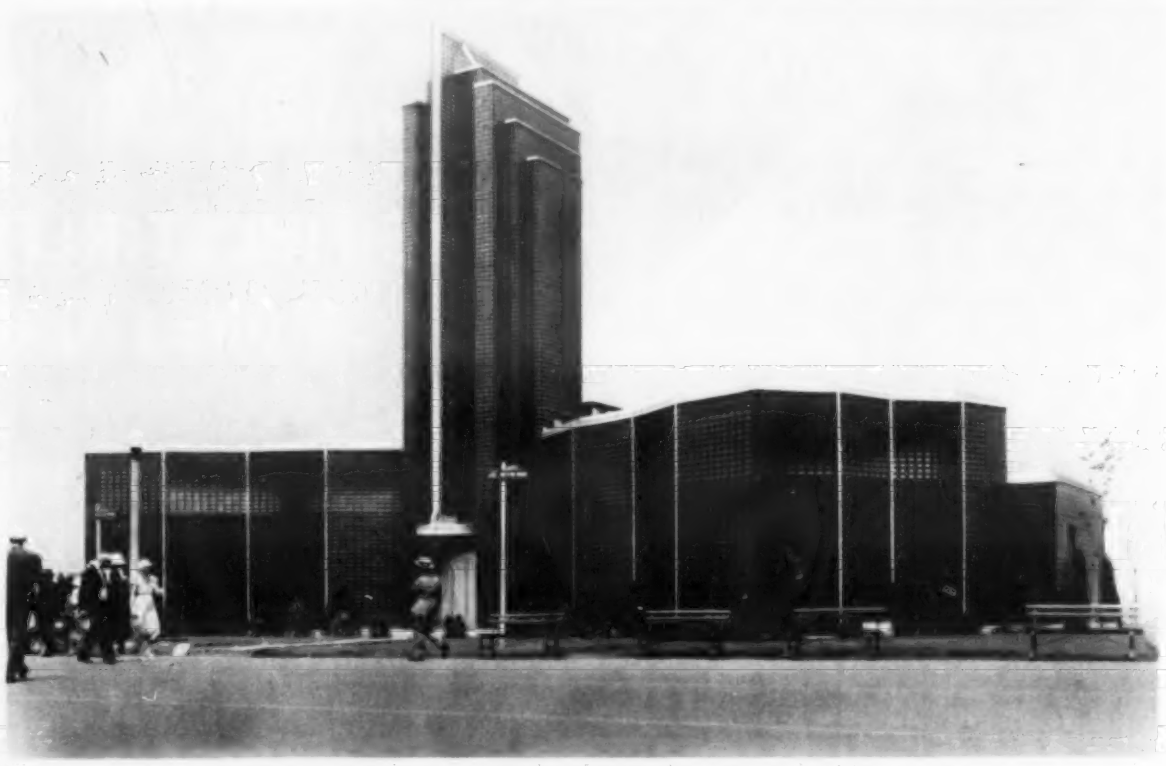
Vice President F. E. Sellman and Salesmanager George L. Roach inspect an air-cooled Electrolux gas refrigerator consigned to A Century of Progress as it leaves the production line of the Evansville plant.

F. H. Christman, sales manager of the Philadelphia Gas Works Co., tells F. E. Sellman, vice president of Electrolux Refrigerator Sales, Inc., that he will see him at the A.G.A. convention in Chicago (left).

F. D. Cadwallader, vice president of Boston Consolidated Gas Co.; F. M. Oliver, vice president of Philadelphia Gas Works Co.; and W. C. Beckjord, vice president of the Boston Consolidated Gas Co., talk it over with F. E. Sellman, vice president of Electrolux (right).

A group of prominent New England gas utility executives (lower left) pause for a photograph before leaving for Chicago. Left to right: F. D. Cadwallader, R. J. Rutherford, Cyrus Barnes, I. T. Haddock, J. J. Quinn, and A. A. Sweeney.





To thousands of visitors to A Century of Progress, the row of modernistic homes is by all odds the most interesting feature of the Fair. Above is one of the most novel of these new departures in house construction—the Owens-Illinois glass brick house. People who live in THIS glass house CAN throw bricks!

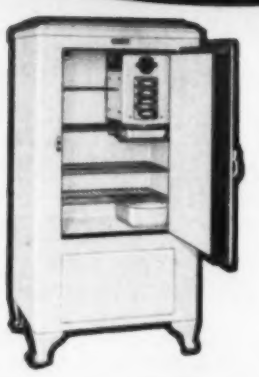
AT THE FAIR • EVERYW

ONE OF THE 7 BEAUTIFUL MODELS in the complete line of New Air-Cooled Electrolux. Interior is of sanitary porcelain, easy to clean. Black panelyte trim with no screws to catch cleaning cloth. Chromium plated hardware.

THE FINEST REFRIGERATOR MONEY CAN BUY

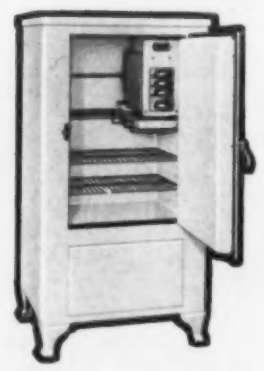
NEW *Air-C*

Other Products of SERVEL, INC.



SERVEL HERMETIC

The simplest electric refrigerator ever developed for the home. Uses no fans, belts or pulleys. Operating unit in the base of cabinet employs natural draft for cooling. Mechanism permanently sealed in bath of oil.



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PRINT IN

WHERE *families are discovering*

est freezing method next to Nature's

. . . and they're finding it only in

Electrolux!

Only Electrolux has no moving parts. A tiny gas flame circulates the simple refrigerant. And ordinary air cools it! No wonder Electrolux offers unmatched advantages!

● **LOWEST OPERATING COST.** Other refrigerators claim low operating cost. Electrolux operates for less than *any* of them. And since Electrolux has nothing to wear, this low cost will not be increased by worn and inefficient parts.

● **PERMANENT SILENCE.** Other refrigerators claim silence. But in Electrolux, the silence is not that of muffled sound that may in time grow noisy. Electrolux is permanently silent because it has no moving parts to cause noise or become noisy, ever.

● **FREEDOM FROM REPAIRS.** Other refrigerators claim trouble-free refrigeration. Only Electrolux has no moving parts to wear or cause trouble. That's why the New Air-Cooled Electrolux offers your customers long life and freedom from repairs.

Yet, with all this, the price of Electrolux is no more than that of other leading refrigerators. You'll find that families who never before thought they could afford an automatic refrigerator today are turning to Electrolux because of its important savings . . . you'll find, too, that families who have automatic refrigerators that need replacing today are choosing Electrolux because it has advantages no other refrigerator can offer. For complete sales information about the New Air-Cooled Electrolux, write, wire or phone Electrolux Refrigerator Sales, Inc., Evansville, Ind.

OTHER ELECTROLUX FEATURES THAT WILL APPEAL TO YOUR CUSTOMERS

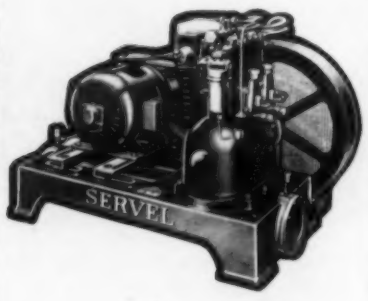
1. Non-stop defrosting
2. Temperature regulator
3. Lots of ice cubes
4. Trigger release on tray
5. Split shelves
6. Two-temperature chilling unit

Air-Cooled ELECTROLUX THE *Gas* REFRIGERATOR

A PRODUCT OF SERVEL

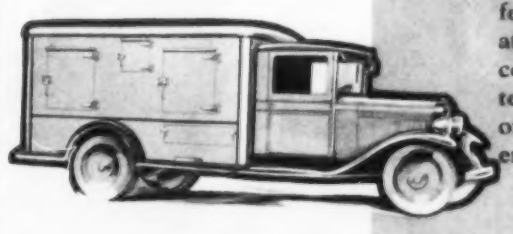
SERVEL CRUSADER

Champion of low-cost refrigeration. Is dependable electric refrigerator meets every normal demand for efficient domestic refrigeration. A modern refrigerator for the family whose budget is curtailed. Good looking and sturdy.



SERVEL COMMERCIAL

A complete line of refrigerating machines to meet every business need. They combine tremendous power, scientific efficiency and low-cost operation. Models for every capacity requirement from 98 to 2780 lbs. ice equivalent per day.



REFRIGERATED TRUCK BODIES

Light-weight, strong truck bodies offering safe, economical, low-temperature transportation. They're well constructed and efficiently insulated. Models to meet every demand of ice cream, packing, dairy and other food industries.

PRINT IN BINDING